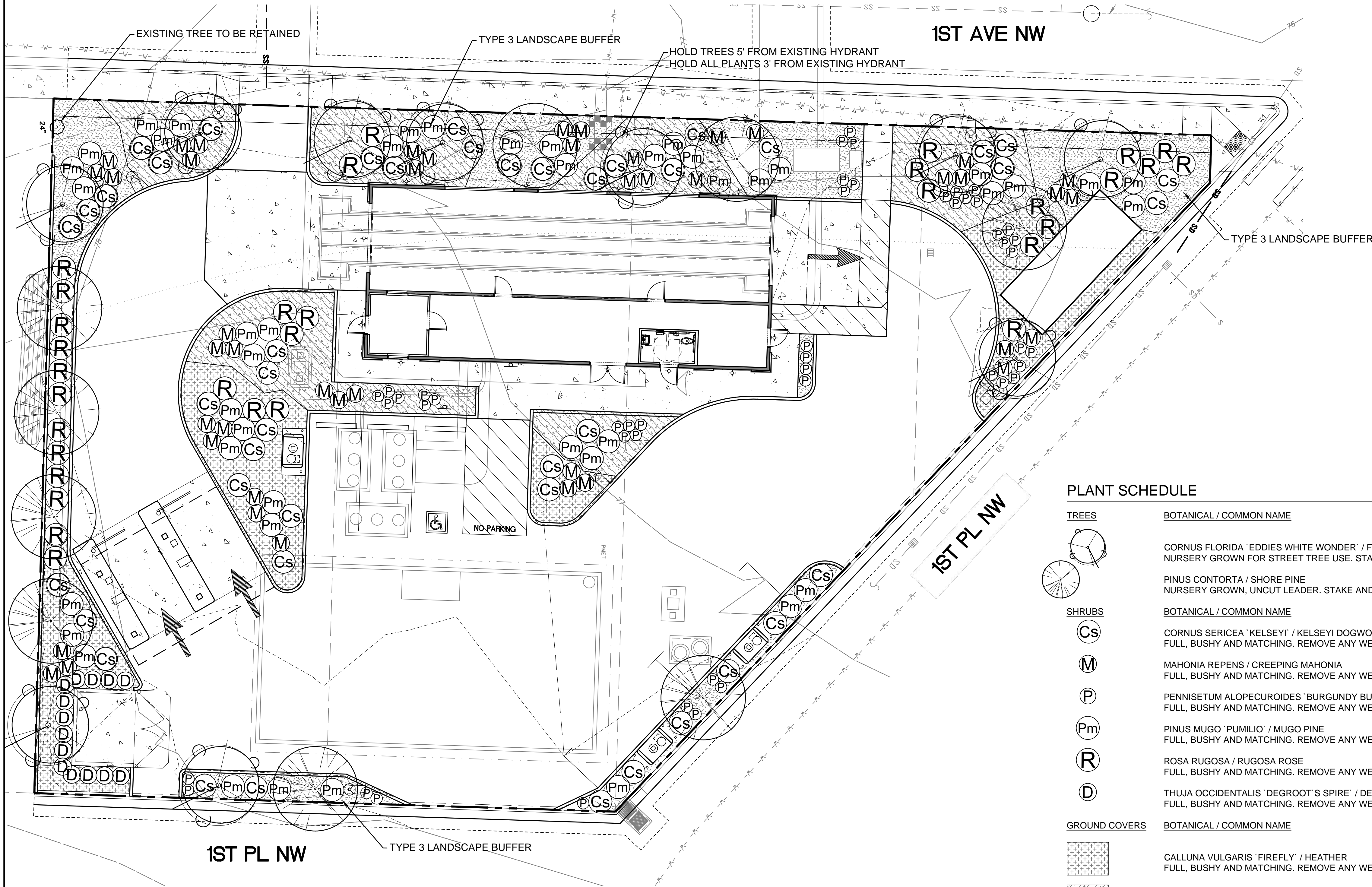
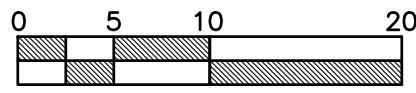
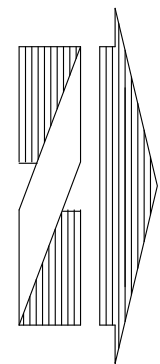







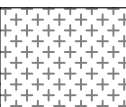




PRELIMINARY PLANTING PLAN
FOR
BROWN BEAR CAR WASH
SE 1/4 OF NE 1/4 OF SEC. 28, TWN. 24 N, RGE. 6 E, W.M.
CITY OF ISSAQUAH, KING COUNTY, WASHINGTON



PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT.	SIZE	QTY	
	CORNUS FLORIDA 'EDDIES WHITE WONDER' / FLOWERING DOGWOOD NURSERY GROWN FOR STREET TREE USE. STAKE AND GUY FOR ONE SEASON.	B & B	1.5" CAL, MIN 6' HT	10	
	PINUS CONTORTA / SHORE PINE NURSERY GROWN, UNCUT LEADER. STAKE AND GUY FOR ONE SEASON.	B & B	2" CAL., MIN. 10' HT.	9	
SHRUBS	BOTANICAL / COMMON NAME	CONT.	WATER USE	SPACING	QTY
	CORNUS SERICEA 'KELSEYI' / KELSEYI DOGWOOD FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	1 GAL. MIN.	LOW	48" o.c.	44
	MAHONIA REPENS / CREEPING MAHONIA FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	1 GAL.	LOW	36" o.c.	45
	PENNISETUM ALOPECUROIDES 'BURGUNDY BUNNY' / BURGUNDY BUNNY DWARF FOUNTAIN GRASS FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	1 GAL.	LOW	24" o.c.	44
	PINUS MUGO 'PUMILIO' / MUGO PINE FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	2 GAL. MIN.	LOW	48" o.c.	47
	ROSA RUGOSA / RUGOSA ROSE FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	2 GAL. MIN.	LOW	48" o.c.	32
	THUJA OCCIDENTALIS 'DEGROOT'S SPIRE' / DEGROOT'S SPIRE ARBORVITAE FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	6' MIN HT	LOW	36" o.c.	14
GROUND COVERS	BOTANICAL / COMMON NAME	CONT.	WATER USE	SPACING	QTY
	CALLUNA VULGARIS 'FIREFLY' / HEATHER FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	1 GAL.	LOW	18" o.c.	367
	LIRIOPE SPICATA 'BIG BLUE' / CREEPING LILY TURF FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	1 GAL.	LOW	18" o.c.	551
	RUBUS PENTALOBUS 'EMERALD CARPET' / BRAMBLE FULL, BUSHY AND MATCHING. REMOVE ANY WEEDS FROM POT BEFORE PLANTING.	1 GAL.	LOW	18" o.c.	442

MINIMUM TREE DENSITY REQUIREMENTS

COMMERCIAL, RETAIL AND FACILITIES = 4 SIGNIFICANT TREES PER 5,000 SF
18,431 SF / 5,000 SF = 3.68
3.68 X 4 = 14.7
14.7 - 1 SIGNIFICANT TREE RETAINED = 13.7 TREES REQUIRED

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 811 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

Revision
No. Date By Cdd. Appr.
10/06/2020 TRS

REVISED PER COMMENTS

PRELIMINARY PLANTING PLAN
BROWN BEAR CAR WASH
55 NW GILMAN BLVD.
ISSAQUAH, WA

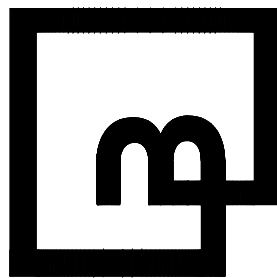
For:
CAR WASH ENTERPRISES, INC.
3977 LEARY WAY NW
SEATTLE, WASHINGTON 98107



Scale:
Horizontal
Vertical
N/A

Designed TR
Drawn TR
Checked JMW
Approved JMW
Date 10/06/19

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Job Number
20693
Sheet
L1 of 6

PRELIMINARY PLANTING PLAN
FOR
BROWN BEAR CAR WASH
SE ¼ OF NE ¼ OF SEC. 28, TWN. 24 N, RGE. 6 E, W.M.
CITY OF ISSAQUAH, KING COUNTY, WASHINGTON

LANDSCAPE PLANTING NOTES AND MATERIALS

SCOPE OF WORK

FURNISH ALL MATERIALS, LABOR, EQUIPMENT AND RELATED ITEMS NECESSARY TO ACCOMPLISH TOPSOIL, TREATMENT AND PREPARATION OF SOIL, FINISH GRADING, PLACEMENT OF SPECIFIED PLANT MATERIALS, FERTILIZER, STAKING, MULCH, CLEAN-UP, DEBRIS REMOVAL, AND 90-DAY MAINTENANCE.

QUALIFICATIONS:
LANDSCAPE CONTRACTOR TO BE SKILLED AND KNOWLEDGEABLE IN THE FIELD OF WORK AND HAVE A MINIMUM OF FIVE (5) YEAR'S EXPERIENCE INSTALLING SIMILAR WORK. CONTRACTOR TO BE LICENSED TO PERFORM THE WORK SPECIFIED WITHIN THE PRESIDING JURISDICTION.

JOB CONDITIONS:
IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE SITE AND REPORT ANY DISCREPANCIES TO THE OWNER OR THE OWNER'S REPRESENTATIVES. ALL PLANT MATERIAL AND FINISH GRADES ARE SUBJECT TO APPROVAL BY THE OWNER.

PROTECTION:
SAVE AND PROTECT ALL EXISTING PLANTINGS SHOWN TO REMAIN. DO NOT PLANT UNTIL OTHER CONSTRUCTION OPERATIONS WHICH CONFLICT HAVE BEEN COMPLETED. IF AN IRRIGATION SYSTEM IS TO BE INSTALLED DO NOT PLANT UNTIL THE SYSTEM HAS BEEN INSTALLED, TESTED, AND APPROVED BY THE OWNER. HANDLE PLANTS WITH CARE. DO NOT DAMAGE OR BREAK ROOT SYSTEM, BARK, OR BRANCHES. REPAIR AND/OR REPLACE ITEMS DAMAGED AS A RESULT OF WORK, OR WORK NOT IN COMPLIANCE WITH PLANS AND SPECIFICATIONS, AS DIRECTED BY OWNER AT NO ADDITIONAL COST TO THE OWNER.

REPAIR OF EXISTING PLANTINGS:
DURING THE COURSE OF WORK, REPAIR ALL EXISTING PLANTING AREAS BY PRUNING DEAD GROWTH, RE-ESTABLISHING FINISH GRADE AND RE-MULCHING TO SPECIFIED DEPTH.

GUARANTEE:
GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE JOB BY OWNER.

90-DAY MAINTENANCE:
CONTRACTOR TO PROVIDE OWNER WITH A SCOPE OF WORK AT TIME OF INITIAL PROJECT BID TO PROVIDE LANDSCAPE AND IRRIGATION MAINTENANCE FOR 90 DAYS FOLLOWING COMPLETION OF PROJECT (ACCEPTANCE) OF FACILITY BY OWNER. WORK TO INCLUDE MAINTENANCE AS DESCRIBED BELOW, IN PLANTING AND IRRIGATION MAINTENANCE.

SUBMITTALS:
SUBMIT TWO (2) COPIES THE FOLLOWING TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO THE START OF ANY WORK:
A) DOCUMENTATION THAT ALL PLANT MATERIAL HAS BEEN ORDERED AND PHOTOS OF THE PRIMARY PLANT MATERIAL SUCH AS TREES. PHOTOS SHALL BE PROVIDED PRIOR TO DELIVERY. LANDSCAPE ARCHITECT AND OWNER RESERVE THE RIGHT TO REJECT ANY SUBSTANDARD PLANT MATERIAL THAT DOES NOT COMPLY WITH THESE SPECIFICATIONS. REJECTED PLANT MATERIAL SHALL BE RETURNED AT NO COST TO OWNER.
B) TOPSOIL ANALYSIS AND RECOMMENDED AMENDMENTS.
C) TREE STAKING AND CUYING MATERIALS.
D) ONE (1) QUART SIZE OF TOPSOIL AND MULCH.
E) PLANTING SCHEDULE INCLUDING DATES AND TIMES.
F) MAINTENANCE INSTRUCTIONS FOR ONE (1) FULL YEAR.

MATERIALS:

PLANT MATERIALS:
PLANT MATERIALS TO BE GRADE NO. 1, SIZED IN ACCORDANCE WITH (AAN) AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1-1996). PRUNE PLANTS RECEIVED FROM THE NURSERY ONLY UPON AUTHORIZATION BY THE LANDSCAPE ARCHITECT. "B & B" INDICATES BALLED AND BURLAPPED; "CONT." INDICATES CONTAINER; "BR" INDICATES BARE ROOT; "CAL" INDICATES CALIPER AT 6" ABOVE SOIL LINE; "GAL" INDICATES GALLON.
A) SPECIFIED PLANT CANOPY SIZE OR CALIPER IS THE MINIMUM ACCEPTABLE CONTAINER OR BALL SIZE AND ESTABLISHES MINIMUM PLANT CONDITION TO BE PROVIDED.
B) QUALITY:
PLANT MATERIAL TO COMPLY WITH STATE AND FEDERAL LAWS FOR DISEASE INSPECTION, PLANTS TO BE FULLY LIVE, VIGOROUS, WELL FORMED, WITH WELL DEVELOPED FIBROUS ROOT SYSTEMS. ROOT BALLS OF PLANTS TO BE SOLID AND FIRMLY HELD TOGETHER, SECURELY CONTAINED AND PROTECTED FROM INJURY AND DESICCATION. PLANTS DETERMINED BY LANDSCAPE ARCHITECT TO HAVE BEEN DAMAGED; HAVE DEFORMITIES OF STEM, BRANCHES, OR ROOTS; LACK SYMMETRY, HAVE MULTIPLE LEADERS OR "Y" CROTCHES LESS THAN 30 DEGREES IN TREES, OR DO NOT MEET SIZE OR ANSI STANDARDS WILL BE REJECTED. PLANT MATERIAL TO BE FROM A SINGLE NURSERY SOURCE FOR EACH SPECIFIED SPECIES/HYBRID. NURSERY SOURCES TO BE THOSE LOCATED IN THE SAME REGION AS THE JOB SITE.
C) SUBSTITUTION:
NO SUBSTITUTION OF PLANT MATERIAL, SPECIES OR VARIETY, WILL BE PERMITTED UNLESS WRITTEN EVIDENCE IS SUBMITTED TO THE OWNER FROM TWO QUALIFIED PLANT BROKERAGE OFFICES. SUBSTITUTIONS WHICH ARE PERMITTED TO BE IN WRITING FROM THE OWNER AND LANDSCAPE ARCHITECT. THE SPECIFIED SIZE, SPECIES AND NEAREST VARIETY, AS APPROVED, TO BE FURNISHED. SUBSTITUTIONS MAY REQUIRE SUBMITTAL TO REVISED LANDSCAPE PLAN TO CITY FOR APPROVAL.
D) LANDSCAPE CONTRACTOR SHALL PROVIDE THE LANDSCAPE ARCHITECT THE SCHEDULE FOR PLANT DELIVERY. PROVIDE ONE WEEK NOTICE FOR PLANT DELIVERY SCHEDULE. LANDSCAPE ARCHITECT TO BE PRESENT FOR ALL PLANT DELIVERIES.

SOIL PREPARATION:
TOPSOIL, AMENDMENT, AND BACKFILL, ARE GENERAL REQUIREMENTS FOR ALL LANDSCAPE AREAS, UNLESS NOTED OTHERWISE ON THE PLANS. SOIL AMENDMENTS AND FERTILIZER NOTED BELOW ARE TO BE USED FOR BID PRICE BASIS ONLY. SPECIFIC AMENDMENTS AND FERTILIZERS WILL BE MADE AFTER SOIL SAMPLES ARE LABORATORY TESTED BY THE CONTRACTOR. PROVIDE CHANGE ORDER FOR ADDITIONAL OR REDUCTION OF MATERIALS REQUIRED OR NOT REQUIRED BY THE SOILS REPORT.

SOIL FERTILITY AND AGRICULTURAL SUITABILITY ANALYSIS:
AFTER ROUGH GRADING AND PRIOR TO SOIL PREPARATION, CONTRACTOR TO OBTAIN TWO REPRESENTATIVE SOIL SAMPLES, FROM LOCATIONS AS DIRECTED BY THE LANDSCAPE ARCHITECT, TO A TESTING LABORATORY. SUBMIT RESULTS TO LANDSCAPE ARCHITECT FOR REVIEW. TESTS TO INCLUDE FERTILITY AND SUITABILITY ANALYSIS WITH WRITTEN RECOMMENDATIONS FOR SOIL AMENDMENT, FERTILIZER, CONDITIONERS, APPLICATION RATES, AND POST-CONSTRUCTION MAINTENANCE PROGRAM. TESTS TO BE CONTRACTED WITH AND PAID FOR BY THE CONTRACTOR.

A) TOPSOIL:
CONTRACTOR IS RESPONSIBLE FOR SUPPLYING ALL TOPSOIL AND FOR DETERMINING THE VOLUME OF TOPSOIL REQUIRED PER THE INFORMATION ON PLANS AND NOTED HERE-IN. CONTRACTOR IS RESPONSIBLE FOR ANY NECESSARY WEED CONTROL RESULTING FROM CONTAMINATED OFF SITE SOURCES.
B) TOPSOIL TO CONSIST OF WINTER MIX AS PRODUCED AND REMIXED BY PACIFIC TOPSOILS, INC. WINTER MIX TO CONSIST OF 1/3 BY VOLUME SANDY LOAM, 1/3 BY VOLUME COMPOSTED GARDEN MULCH, AND 1/3 BY VOLUME COARSE WASHED SAND OR EQUIVALENT. AT MINIMUM, TOPSOIL PRODUCTS BROUGHT ON SITE TO CONTAIN AMENDMENTS AS LISTED IN "C".
C) TOPSOIL TO INCLUDE THE FOLLOWING AMENDMENTS AS NECESSARY:
THE FOLLOWING AMOUNT PER 1,000 SQUARE FEET:
1. 6-CUBIC YARDS ORGANIC COMPOST. COMPOST TO BE FREE OR NON-FARM ANIMAL SOURCES, NOR TO BE FROM SOURCES CONTAINING REDWOOD OR CEDAR PRODUCTS.
2. 30-POUNDS NITROFORM (38-0-0)
3. 5-POUNDS AMMONIUM SULFATE
4. 40-POUNDS CALCIUM CARBONATE LIMESTONE
5. 40-POUNDS DOLOMITE LIMESTONE
6. 5-OUNES BORON (AS BORAX)
ALL AMENDMENTS TO BE THOROUGHLY MIXED PRIOR TO INCORPORATION INTO TOPSOIL.

D) PLANTING BACKFILL FOR ALL TREES, SHRUBS, AND GROUNDCOVERS:
1. 0.6-CUBIC YARDS PER VOLUME TOPSOIL
2. 0.4-CUBIC YARDS ORGANIC COMPOST.
3. 3-POUNDS NITROFORM (38-0-0)
4. 1-POUNDS AMMONIUM SULFATE
5. 2-POUNDS CALCIUM CARBONATE LIMESTONE
6. 2-POUNDS DOLOMITE LIMESTONE
E) TOPSOIL PREPARATION AND INSTALLATION. SEE CITY OF ISSAQUAH STANDARD DETAIL FOR TOPSOIL PLACEMENT AND INSTALLATION.

BARK MULCH (TOPDRESSING):
ONE-HALF-INCH (1/2") SIZE, TO ONE-QUARTER (1/4"), I.E., "FINE," HEMLOCK/FIR BARK.

STAKES:
2-INCH DIAMETER BY 8-FOOT MINIMUM LODGEPOLE PINE STAKES.

GUY MATERIAL:
1-INCH WIDE POLYETHYLENE CHAIN LOCK TYPE TIES; OR, 3/8" DIAMETER RUBBER. NO WIRE.

ROOT BARRIER:
PROVIDE ROOT BARRIER AT STREET TREES DEEP ROOT - TREE ROOT GUIDES - PRODUCT #UB 24-2. INSTALL PER MANUFACTURERS WRITTEN SPECIFICATIONS. DEEP ROOT PARTNERS LP (415) 781-0700. WWW.DEEPROOT.COM. OR APPROVED EQUAL. SEE CITY OF ISSAQUAH STANDARD STREET TREE DETAIL THIS SET.

LAWN:
COMMERCIAL SEED TOLERANT OF LOCAL CLIMATE

HERBICIDE:
HERBICIDE IS NOT RECOMMENDED FOR THE FIRST YEAR AFTER INSTALLATION.

ANTI-DESICCANT:
"WILT-PROOF," 48 HOURS PRIOR TO SHIPMENT TO SITE FROM JUNE 1 THROUGH SEPTEMBER. THOROUGHLY ROOT WATER PLANTS PRIOR TO DELIVERY. PLANT MATERIAL DELIVERED TO SITE TO BE KEPT CONTINUALLY MOIST THROUGH INSTALLATION.

EXECUTION:
PRE-CONSTRUCTION MEETING:
ONCE CONTRACT HAS BEEN AWARDED, LANDSCAPE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH LANDSCAPE ARCHITECT. PROVIDE ONE WEEK NOTICE FOR MEETING.

FINISH GRADES:
FINE GRADE AND REMOVE ROCKS AND FOREIGN OBJECTS OVER 2 INCHES DIAMETER FROM TOP SURFACE OF PREPARED LANDSCAPE AREAS. FINISH ELEVATIONS TO BE DEFINED AS 3 INCHES BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL PLANTING BED AREAS AND 1-INCH BELOW CURBS, WALKS AND/OR OTHER ADJACENT HARDSCAPE FOR ALL LAWN AREAS. FINISH GRADE REFER TO GRADES PRIOR TO INSTALLATION OF MULCH OR LAWN.
ALL FINISH GRADES TO BE SMOOTH EVEN GRADES, LIGHTLY COMPACTED, AS SHOWN ON THE PLAN AND DETAILED. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES. SITE CIVIL DRAWINGS IDENTIFY FINAL ELEVATIONS.

TREES AND SHRUBS:
ARRANGE TREES AND SHRUBS ON SITE IN PROPOSED LOCATIONS PER DRAWINGS. EXCAVATE PIT, PLANT AND STAKE OR GUY, AS CALLED OUT AND DETAILED. ALL TREES, SHRUBS, AND SUPPORTS TO STAND VERTICAL. BACKFILL SHALL BE PIT SPOILS. SETTLE BACKFILL USING WATER ONLY. NO MECHANICAL COMPACTION.

GROUNDCOVERS:
EXCAVATE PITS TO A MINIMUM OF 3 INCHES BELOW, AND TWICE THE ROOT BALL DIAMETER. WATER THOROUGHLY AND TAKE CARE TO ENSURE THAT ROOT CROWN IS AT PROPER GRADE, AS DETAILED.

MULCH:
MULCH ALL LANDSCAPE AREAS NOT COVERED BY LAWN AND/OR SEED. APPLY SUFFICIENT QUANTITY TO PROVIDE A MINIMUM OF 2-INCH DEPTH, UNLESS OTHERWISE NOTED.

UTILITY CLEARANCES:
FIELD ADJUST PLANT LOCATIONS FOR 8-FOOT SEPARATION OF TREES/SHRUBS AND 2-FOOT SEPARATION FOR GROUNDCOVER FROM FIRE HYDRANTS AND UTILITY VAULTS.

PLANTING MAINTENANCE:
CONTRACTOR TO MAINTAIN PLANTINGS THROUGH COMPLETED INSTALLATION, AND UNTIL ACCEPTANCE OF LANDSCAPE INSTALLATION. PLANTING MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, TIGHTENING AND REPAIRING OF TREE GUYS, RESETTling PLANTS TO PROPER GRADES OR POSITION, RE-ESTABLISHING SETTLED GRADES, AND MOWING LAWNS WEEKLY AFTER LAWN ESTABLISHMENT. HERBICIDE IS NOT RECOMMENDED FOR ONE YEAR FOLLOWING LANDSCAPE INSTALLATION. INCLUDED IS REPLACEMENT OF DEAD PLANTS AND PLANTS SHOWING LOSS OF 40 PERCENT OR MORE OF CANOPY.

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 811 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

Revision
Revised Per Comments

Appr.

Cd.

By

Date

No.

Title:

LANDSCAPE NOTES
BROWN BEAR CAR WASH
55 NW GILMAN BLVD.
ISSAQUAH, WA

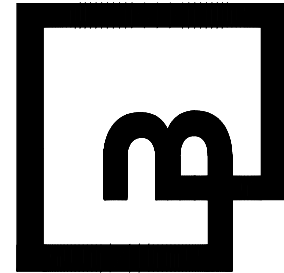
For:
CAR WASH ENTERPRISES, INC.
3977 LEARY WAY NW
SEATTLE, WASHINGTON 98107



Scale:
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Vertical N/A

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Drawn TR
Checked JMW
Approved JMW
Date 10/06/19

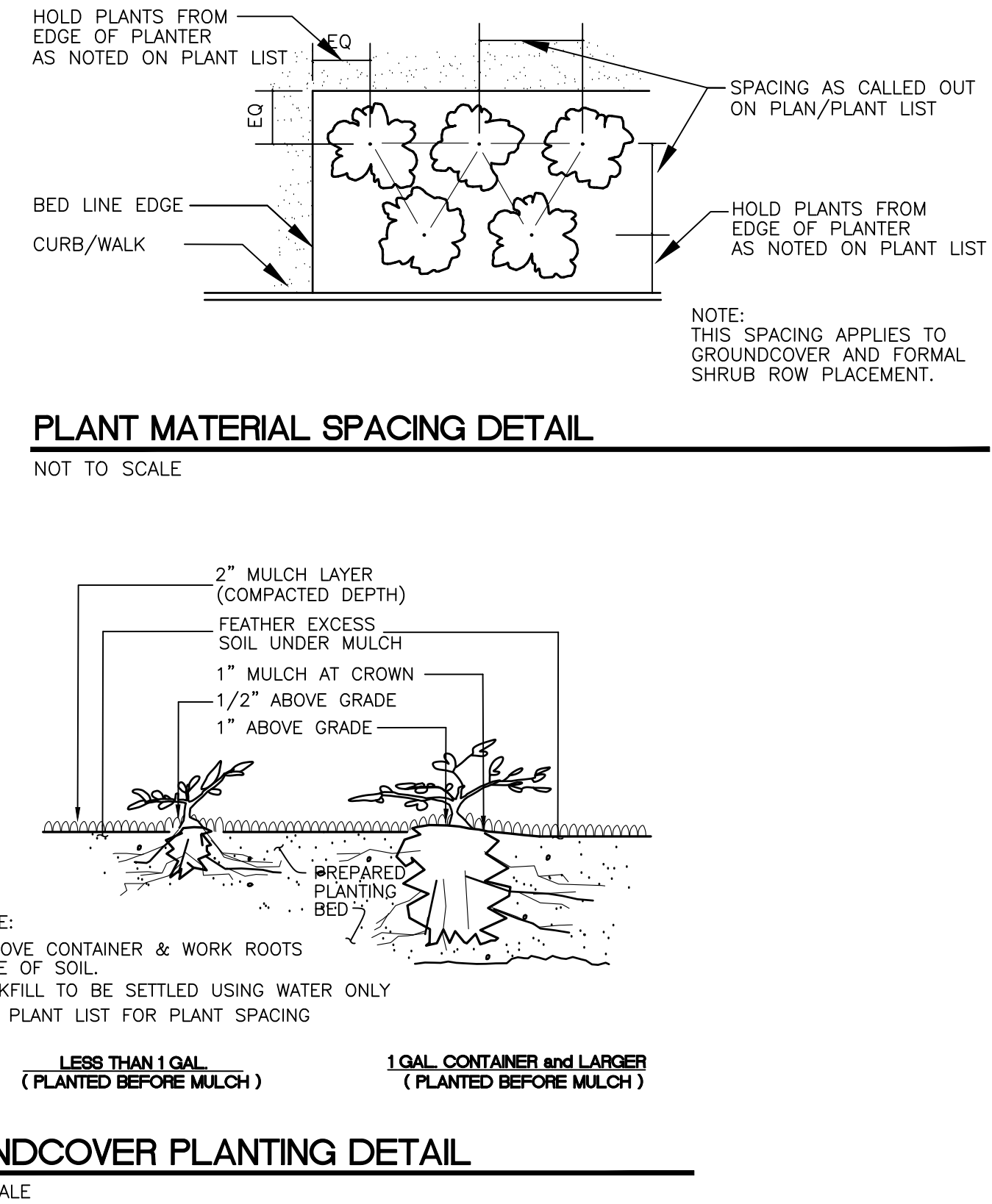
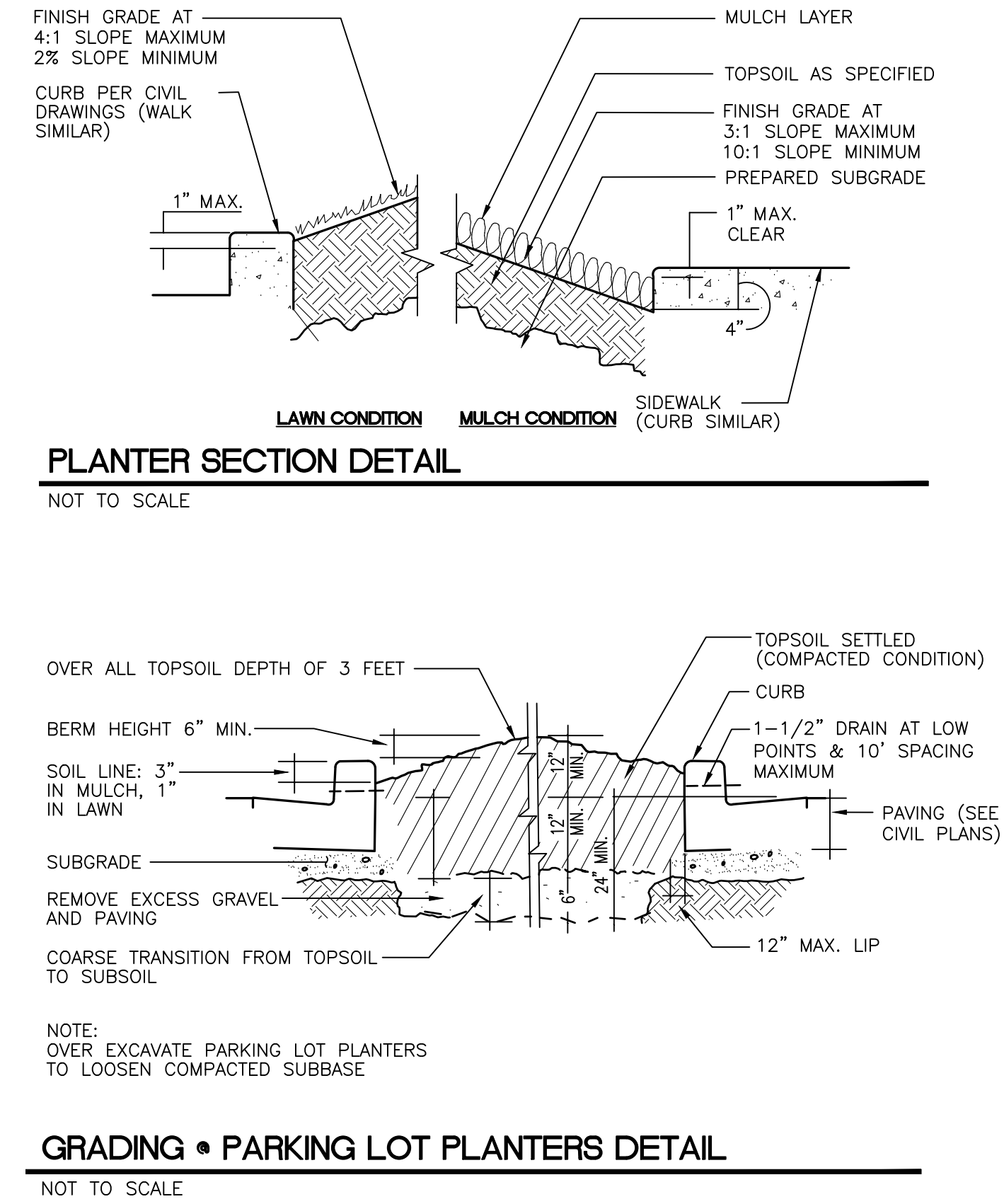
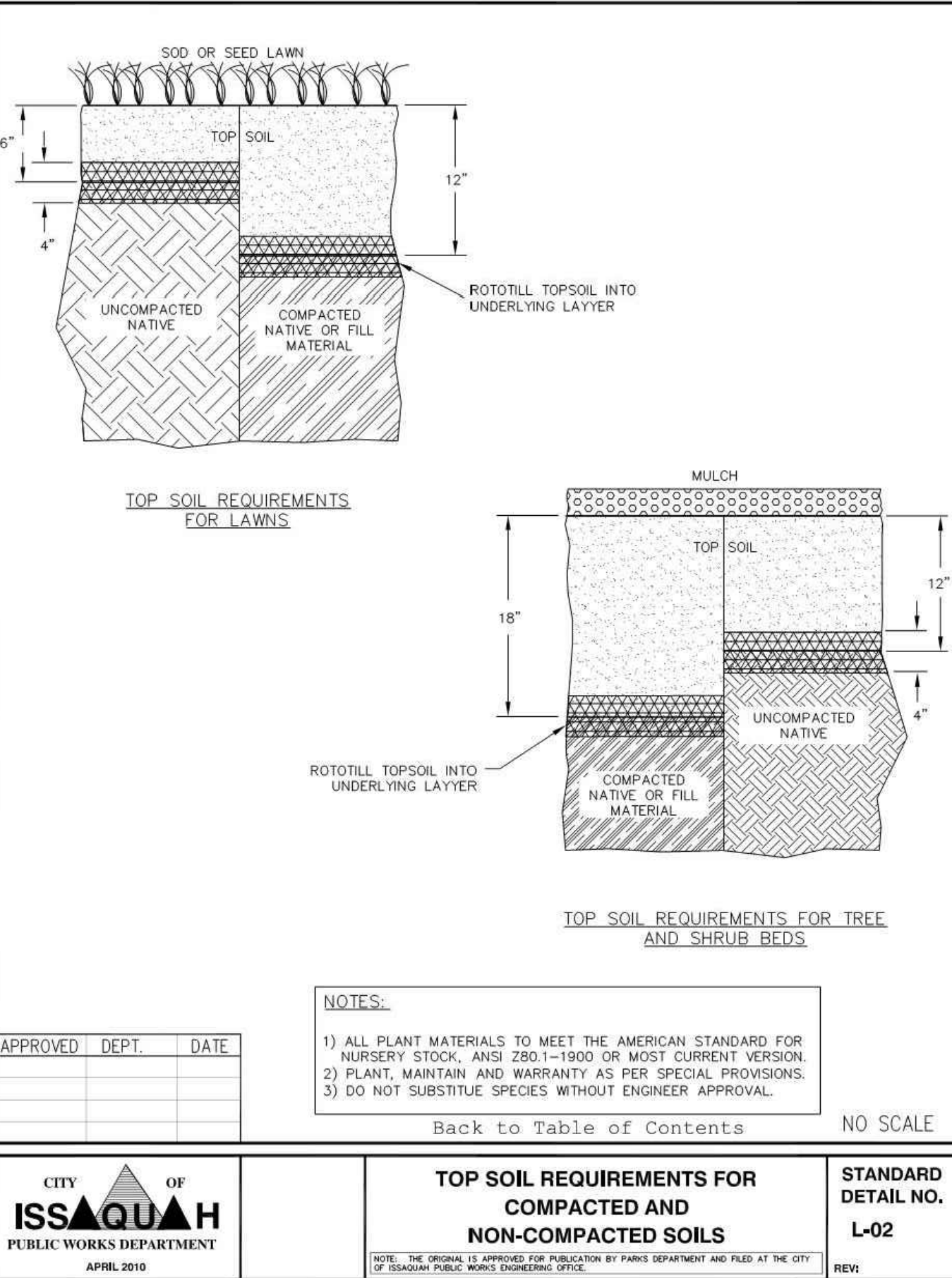
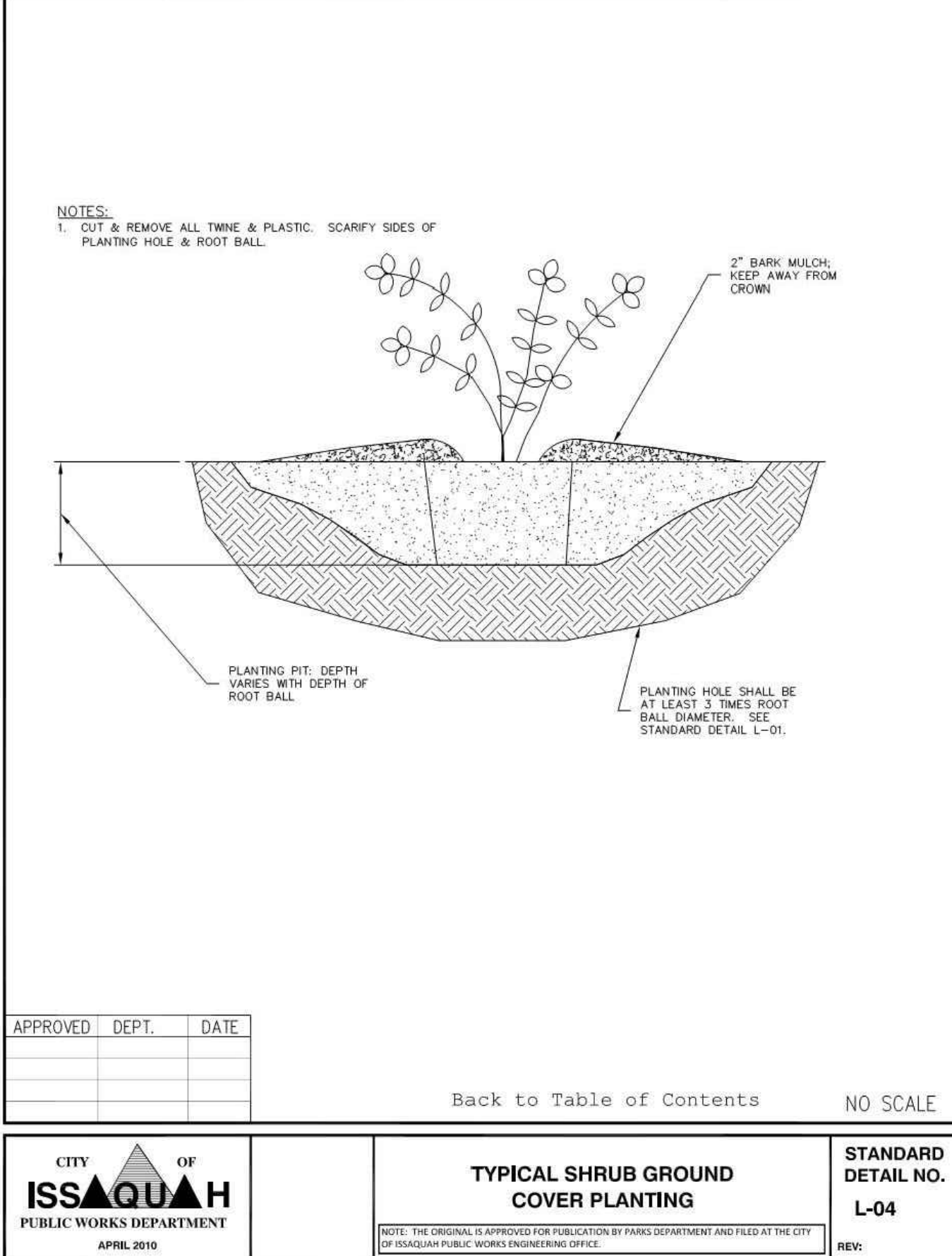
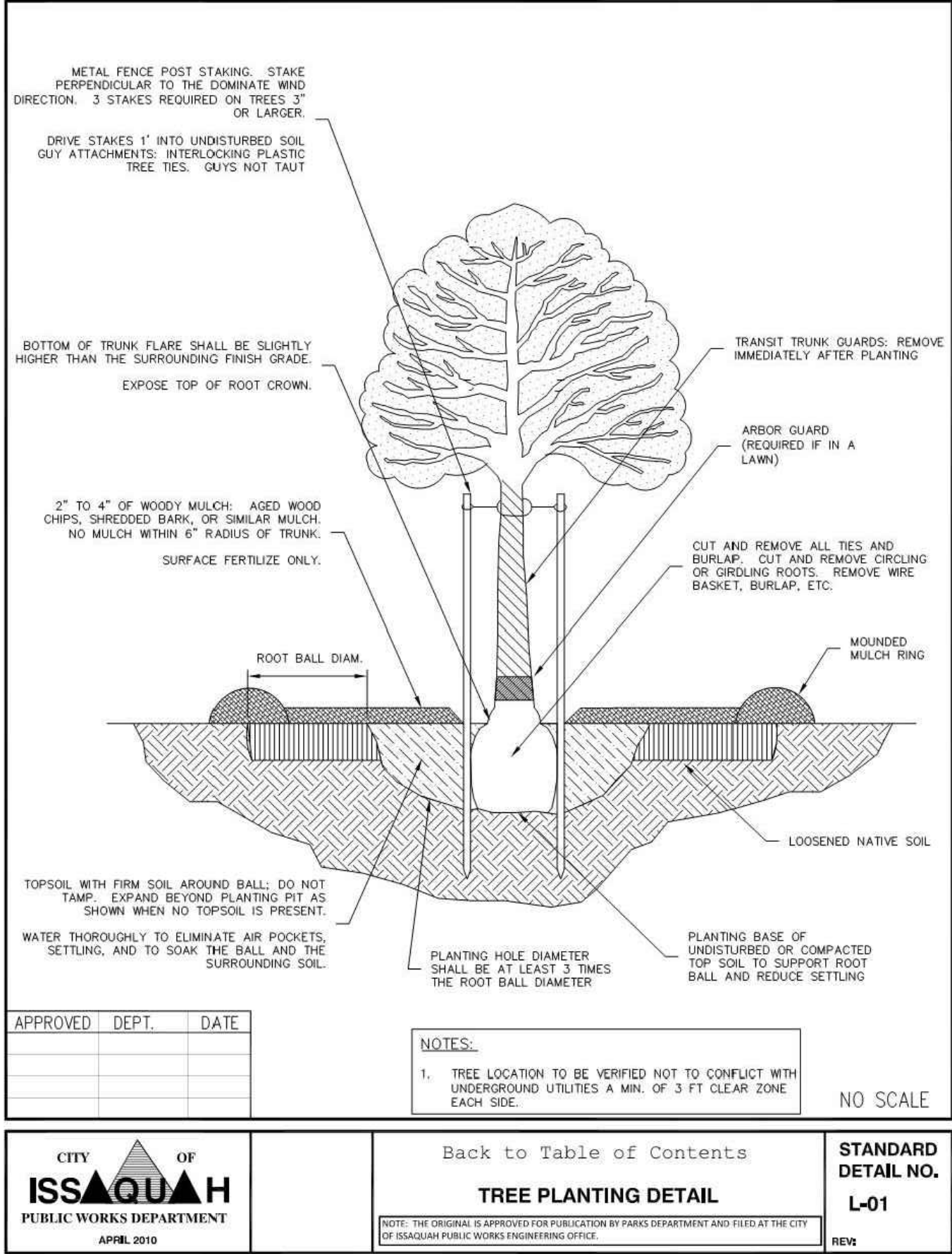
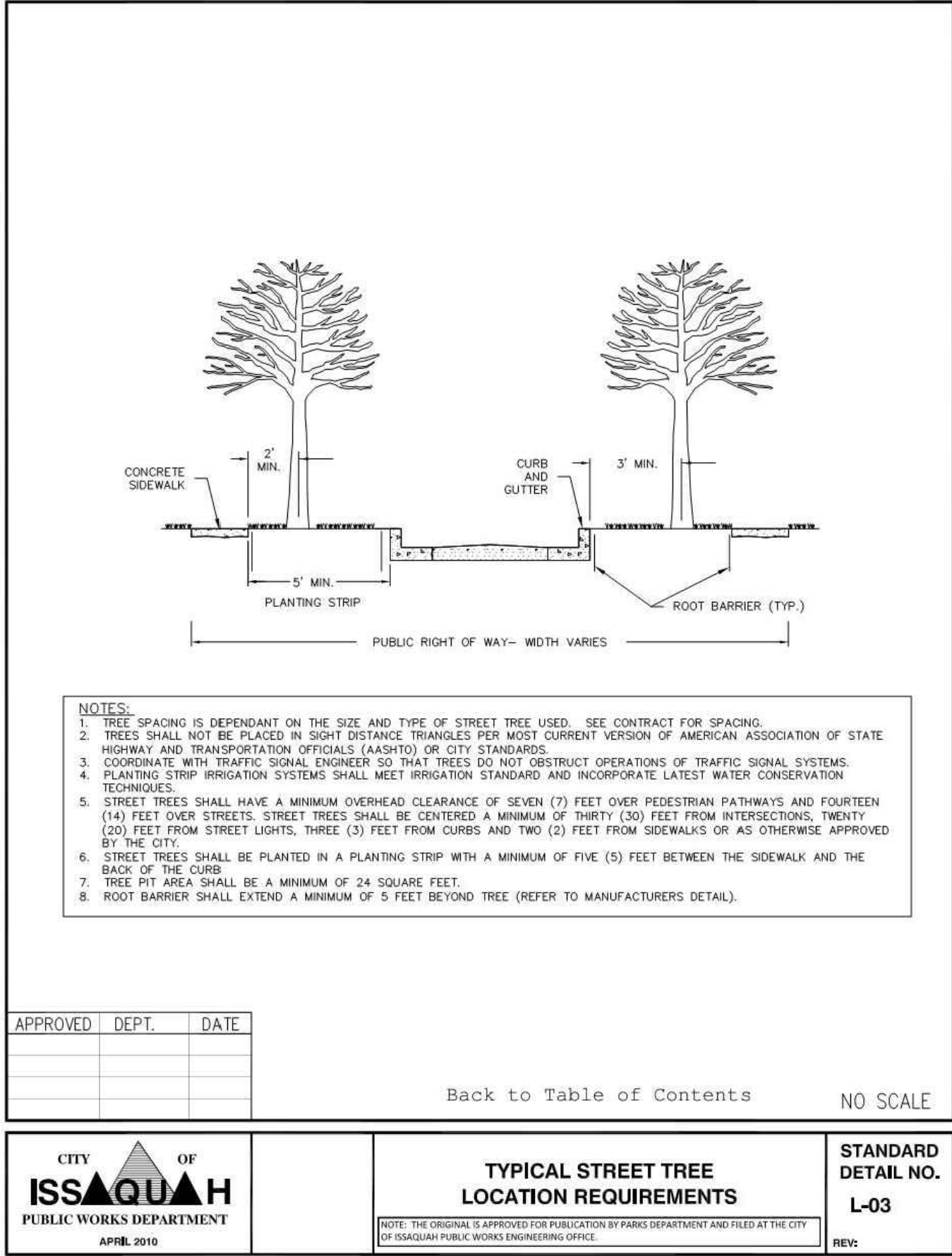
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Job Number
20693

Sheet
L2 of 6

LANDSCAPE DETAILS
FOR
BROWN BEAR CAR WASH
SE 1/4 OF NE 1/4 OF SEC. 28, TWN. 24 N, RGE. 6 E, W.M.
CITY OF ISSAQUAH, KING COUNTY, WASHINGTON



UTILITY CONFLICT NOTE:

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LANDSCAPE DETAILS
BROWN BEAR CAR WASH
55 NW GILMAN BLVD.
ISSAQUAH, WA

Title:

CAR WASH ENTERPRISES, INC.
3977 LEARY WAY NW
SEATTLE, WASHINGTON 98107

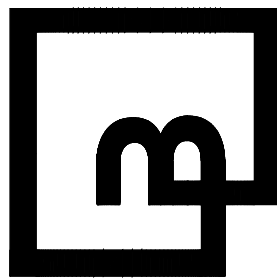
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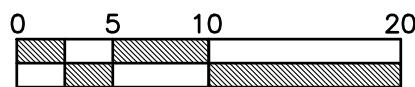
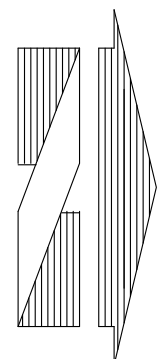
Job Number 20693
Sheet L3 of 6

PRELIMINARY IRRIGATION PLAN

FOR

BROWN BEAR CAR WASH

SE 1/4 OF NE 1/4 OF SEC. 28, TWN. 24 N, RGE. 6 E, W.M.
CITY OF ISSAQUAH, KING COUNTY, WASHINGTON



IRRIGATION POINT OF CONNECTION UTILIZING
EXISTING 1" WATER METER

1ST AVE NW

P.O.C.

MOUNT CONTROLLER ON EXTERIOR
WALL. INPUT: 117VAC +/-10%,
60Hz. OUTPUT: 26.5 VAC, 1.5 A.
INSTALL 1" DIAMETER PVC CONDUIT
FOR 24V ELECTRICAL WIRING
FROM THE CONTROLLER TO
LANDSCAPE AREA. PAINT CONDUIT
TO MATCH BUILDING COLOR.

MOUNT RAIN SENSOR ON
WEATHER EXPOSED PORTION OF
EXTERIOR WALL AT 8' - 9'
HEIGHT.

1ST PL NW

IRRIGATION SCHEDULE

SYMBOL

DRIP EMITTER



HUNTER LANDSCAPE DRIPLINE COMPONENTS WITH HUNTER COMPRESSION FITTINGS AND ADAPTERS
ICZ-101-LF WITH 40 PSI PRESSURE REGULATOR
PLD-04-18-250 DRIP EMITTER TUBING 0.40 GALLONS PER HOUR FLOW, EMITTERS 18" O.C.
AIR/VACUUM RELIEF RELIEF VALVE KIT, IN VALVE BOX
GALVANIZED TIE-DOWN STAKES, AT 3' ON CENTER

SYMBOL

DRIP IRRIGATION: HUNTER ICZ-101-LF VALVE, ONE VALVE PER BOX

P.O.C.



WILKINS 950 XLT- 1.5" DOUBLE CHECK VALVE (STATE APPROVED); TEST AND CERTIFICATION BY LICENSED
BACKFLOW TESTER
WILKINS 850 - BALL VALVE, SIZE TO MATCH PIPE
CARSON INDUSTRIES #1730 (TWO AT P.O.C.) GRADE LEVEL VAULT WITH BOLT LOCK LID



HUNTER RAIN-CLICK WIRED SENSOR. INSTALL AT A LOCATION EXPOSED TO WEATHER



HUNTER PRO-C IRRIGATION CONTROLLER IN STAINLESS STEEL CABINET MOUNTED TO EXTERIOR WALL.
COORDINATE LOCATION WITH GENERAL CONTRACTOR AND ELECTRICIAN



PLASTIC BALL VALVE, MATCH LINE SIZE, IN VALVE BOX



HUNTER HQ-33LRC 3/4" QUICK COUPLING VALVE, IN VALVE BOX, PROVIDE TWO KEYS AND SWIVELS

MAINLINE - SCH 40 PVC (18" COVER); SIZE PER PLAN, 1-1/2" SIZE MINIMUM

LATERAL - SCH 40 PVC (12" COVER); SIZE PER PLAN, 3/4" SIZE MINIMUM

SLEEVE - CLASS 200 PVC; 4" SIZE AND 18" MINIMUM COVER IN LANDSCAPE AREAS,
6" SIZE AND 24" MINIMUM COVER AT VEHICLE CROSSINGS

SCH 40 PIPE SIZING CHART

PIPE SIZE	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	
FLOW GPM	1-8	8.1-13	13.1-23	23.1-32	32.1-53	53.1-74	GPM (MAX.)

ALL IRRIGATION CONNECTIONS AND FITTINGS SHALL BE LEAD-FREE

IRRIGATION SHOWN DIAGRAMATICALLY FOR PLAN CLARITY. COMMON TRENCH AND PLACE EQUIPMENT
IN LANDSCAPE; MANIFOLD GROUPED VALVES IN ADJACENT SHRUB AREAS WHERE FEASIBLE.

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL
EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT BY POT-HOLING THE UTILITIES AND SURVEYING
THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY
LOCATE @ 811 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY
CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS
SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO
VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING
ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

Revision
No. Date By Cdd. Appr.
10/06/2020

REVISED PER COMMENTS

Title:

PRELIMINARY IRRIGATION PLAN
BROWN BEAR CAR WASH
55 NW GILMAN BLVD.
ISSAQUAH, WA

For:

CAR WASH ENTERPRISES, INC.
3977 LEARY WAY NW
SEATTLE, WASHINGTON 98107



Scale:

Horizontal

Vertical

N/A

Designed TR

Drawn TR

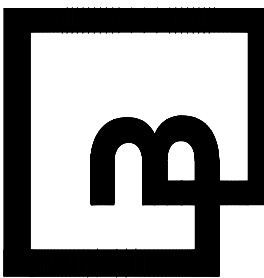
Checked JMW

Approved JMW

Date 10/06/19

Barghausen
Consulting Engineers, Inc.

18215 72nd Avenue South
Kent, WA 98032
425.251.6222 barghausen.com

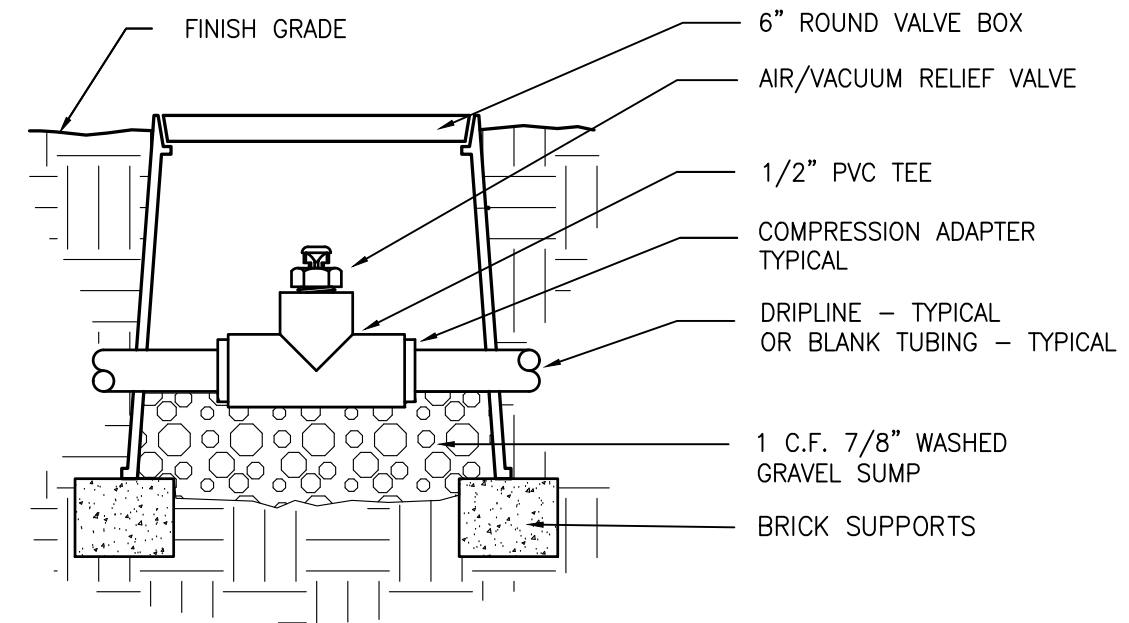


Job Number

20693

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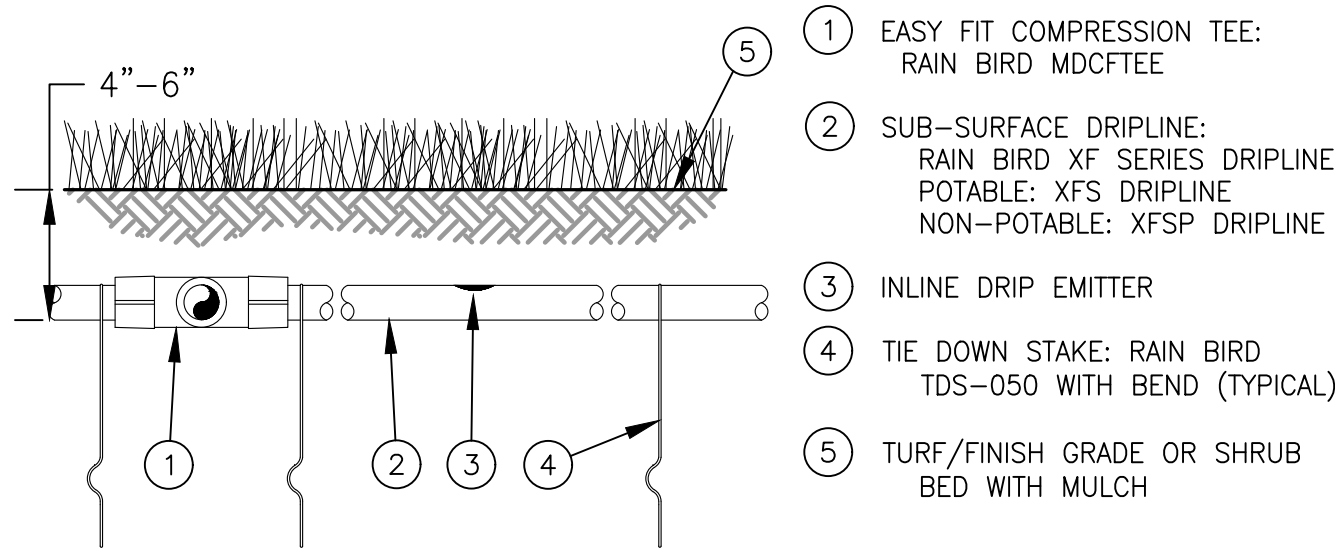
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NOTE:
AIR/VACUUM RELIEF VALVE CANNOT BE CONNECTED LOWER THAN DRIPLINE LATERALS.
FOR USE ON ZONES OF 7 GPM OR LESS ONLY (PLUMBED TO TUBING).

1/2" AIR/VACUUM RELIEF VALVE DETAIL

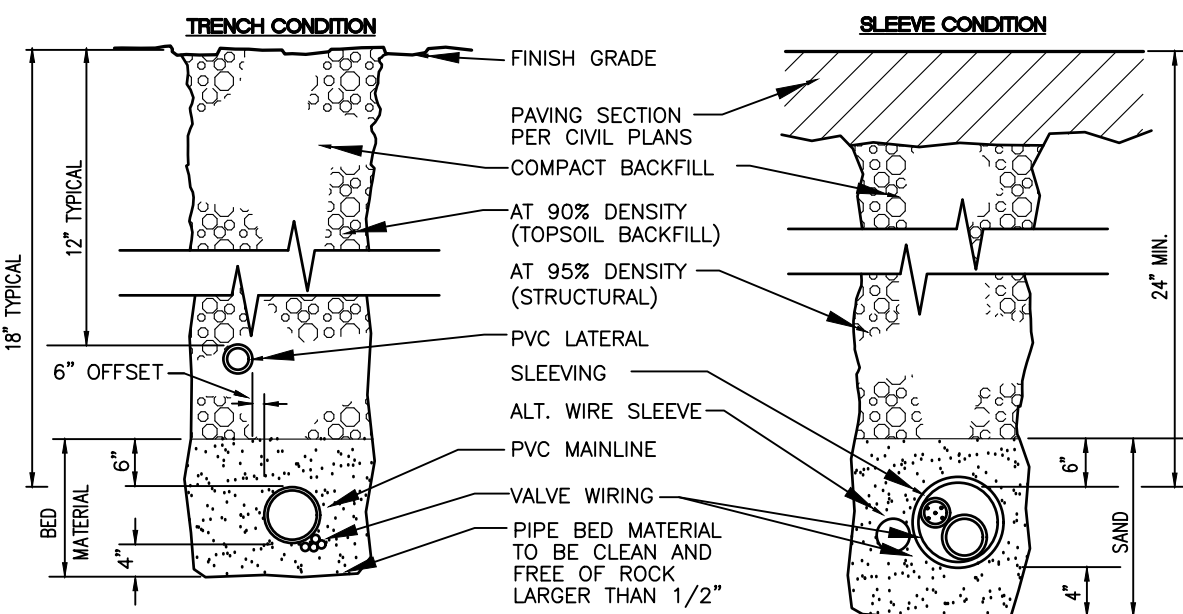
NOT TO SCALE



NOTES:
1. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
2. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
3. INSERTION PLOW AND TRENCHED INSTALLATIONS DO NOT REQUIRE TIE DOWN STAKES.

DRIPLINE BURIAL

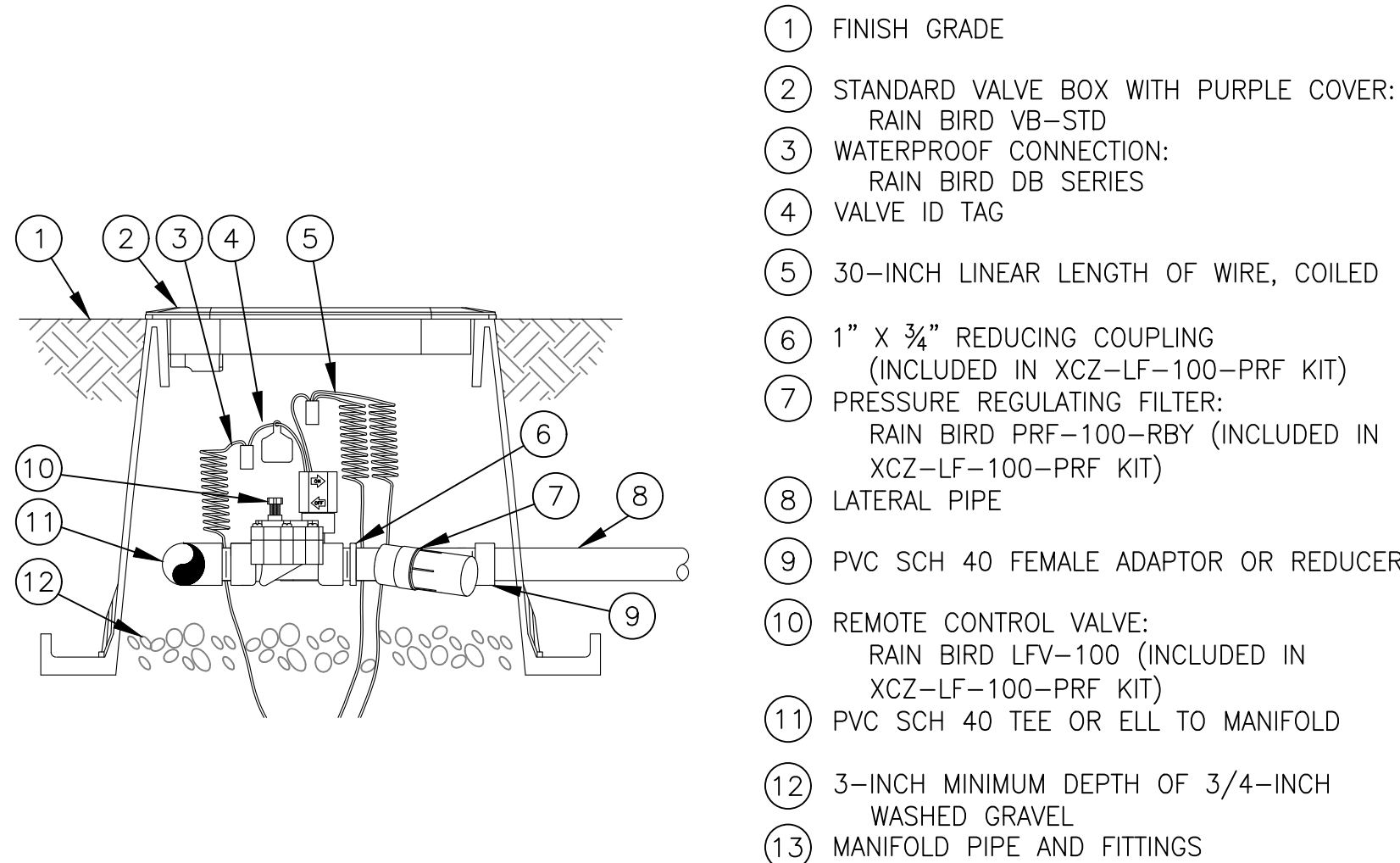
NOT TO SCALE



NOTE:
SLEEVING MATERIAL SHALL BE PVC CLASS 160(SDR-26).
DIMENSIONS ARE MIN. CLEARANCES.
ALL IRRIGATION SLEEVING TRENCH BACKFILL MATERIAL SHALL BE CLASS "B" OR BETTER (MAX. OF 10% PASSING NO.40 SCREEN) AND BE COMPACTED TO MIN. 95% OPTIMUM DENSITY PER ASTM D-1557-70 (MODIFIED PROCTOR)

SLEEVE/TRENCHING DETAIL

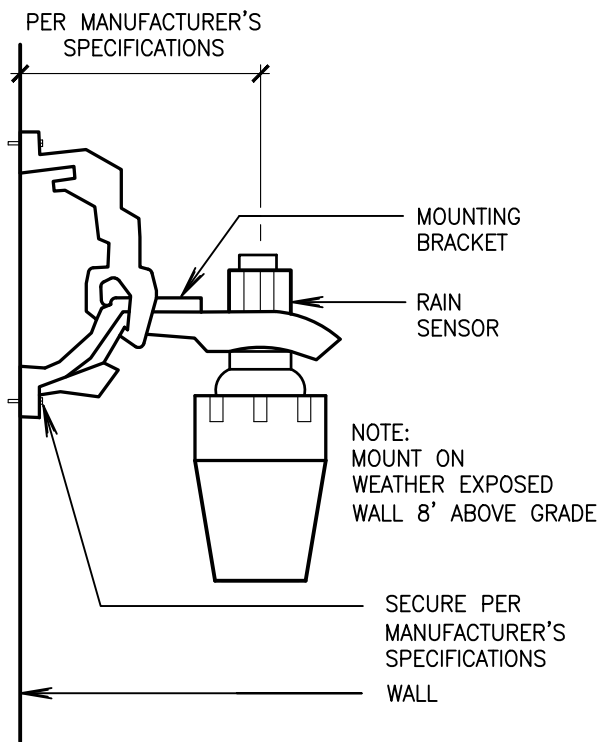
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SIDE VIEW

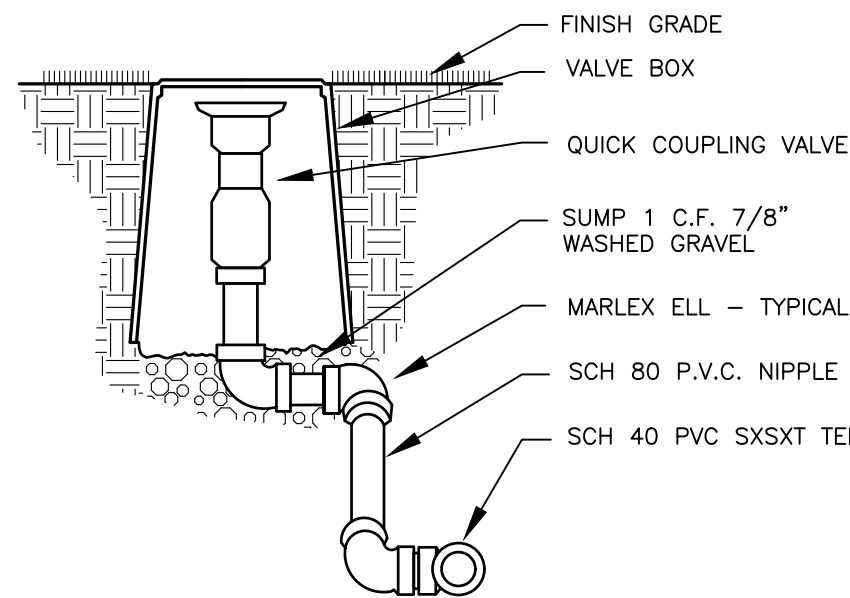
DRIP IRRIGATION VALVE

NOT TO SCALE



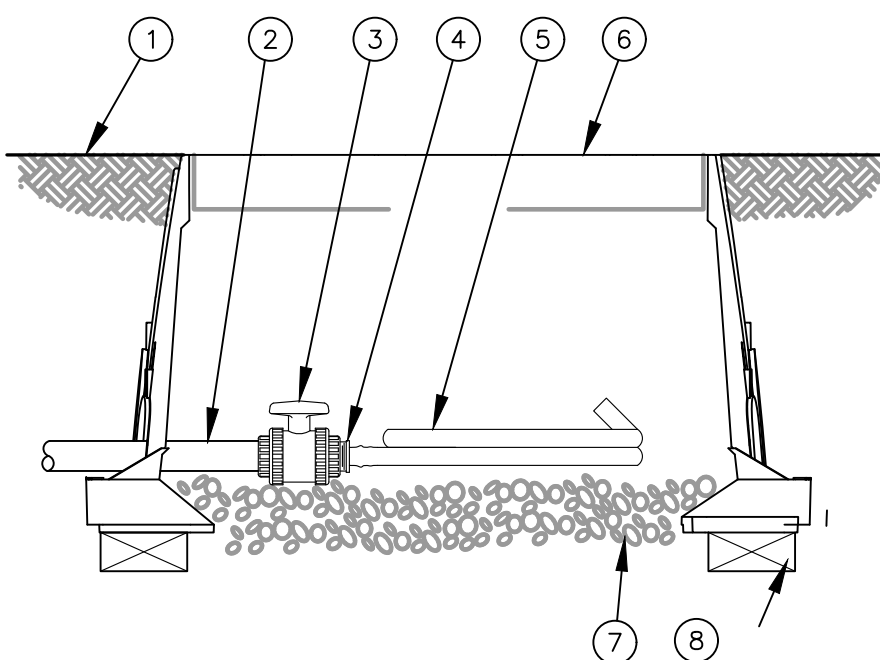
RAIN SENSOR DETAIL

NOT TO SCALE



QUICK COUPLING VALVE DETAIL

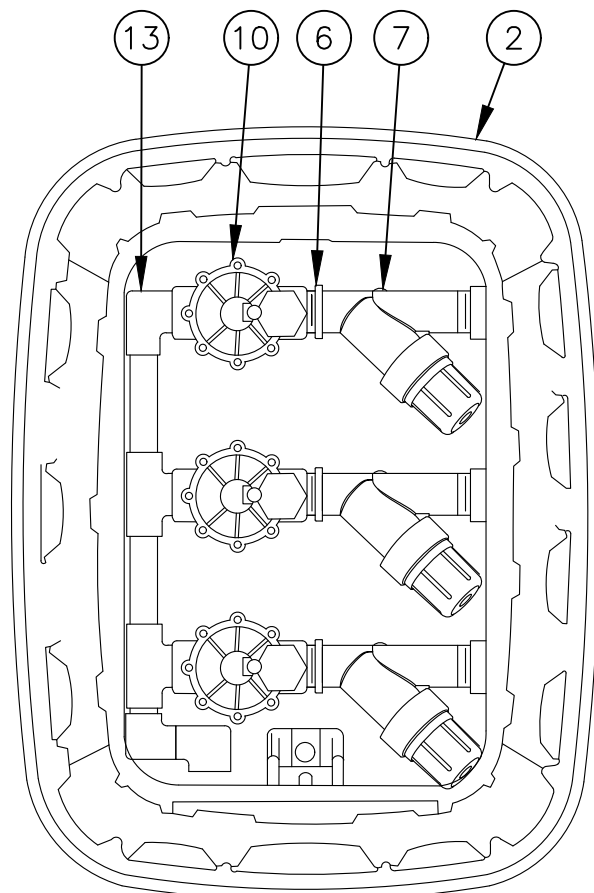
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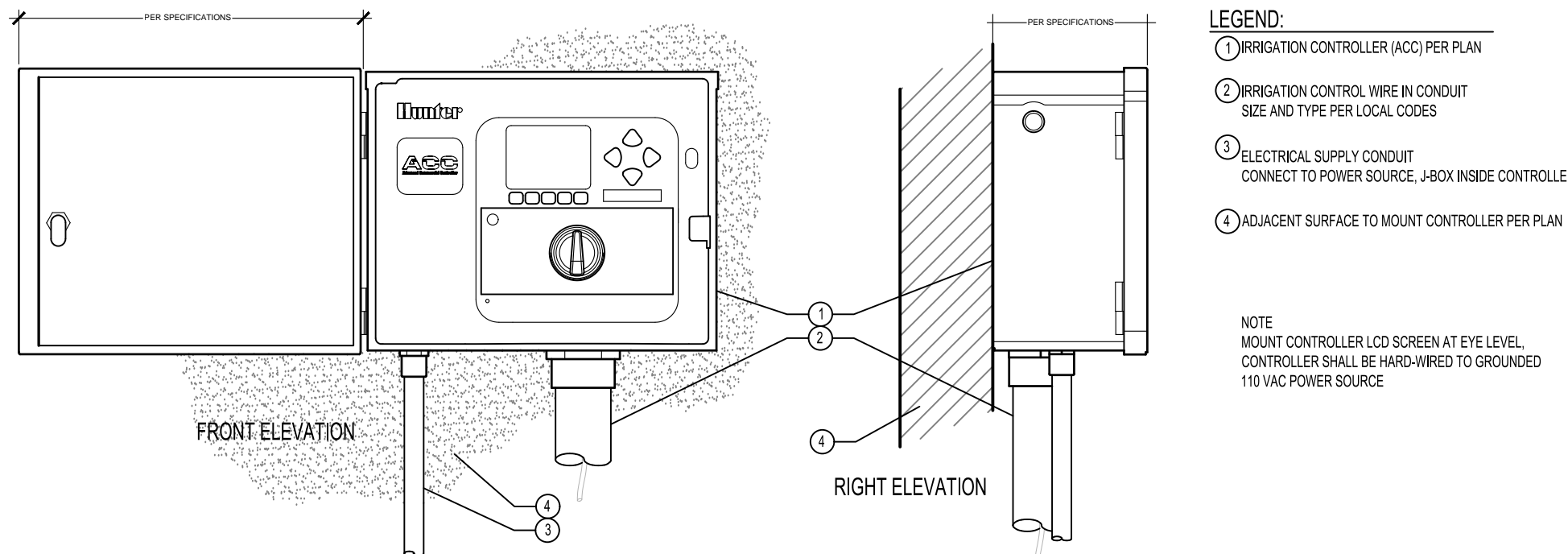
1. FINISH GRADE
2. PVC DRIP MANIFOLD PIPE
3. PVC 1" X 3/4" TRUE UNION BALL VALVE
4. EASY FIT MALE X BARB ADAPTER: RAIN BIRD XFF-MA-075
5. SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES BLANK TUBING
6. 12-INCH VALVE BOX WITH COVER: RAIN BIRD VB-STD
7. 3-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL
8. BRICK (1 OF 2)

FLUSH POINT WITH BALL VALVE

NOT TO SCALE



TOP VIEW



IRRIGATION CONTROLLER, WALL MOUNT

NOT TO SCALE

IRRIGATION NOTES AND DETAILS

FOR

BROWN BEAR CAR WASH

SE 1/4 OF NE 1/4 OF SEC. 28, TWN. 24 N, RGE. 6 E, W.M.
CITY OF ISSAQUAH, KING COUNTY, WASHINGTON

LANDSCAPE IRRIGATION NOTES

- GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE:
 - VERIFY EXISTING CONTROLLER AND FEASIBILITY TO HOOK UP ADDITIONAL VALVES THAT WILL BE REQUIRED TO EXPAND THE EXISTING IRRIGATION SYSTEM AND PROVIDE ADEQUATE WATER TO ALL NEW PLANT MATERIAL.
 - VERIFICATION OF STATIC WATER PRESSURE AT POINT-OF-CONNECTION (P.O.C.). CONTRACTOR SHALL NOTIFY OWNER AND BARGHAUSEN CONSULTING ENGINEERS, INC.
 - INSTALLATION OF SLEEVING.
- PROVIDE ALL LABOR, MATERIALS, TRANSPORTATION, AND SERVICES NECESSARY TO FURNISH AND INSTALL A COMPLETE IRRIGATION SYSTEM AS INDICATED ON THE DRAWINGS AND/OR NOTES. PROVIDE A ONE (1) YEAR WARRANTY/GUARANTEE FROM FINAL ACCEPTANCE AGAINST ALL DEFECTS IN MATERIALS, EQUIPMENT, AND WORKMANSHIP.
- COORDINATE IRRIGATION INSTALLATION WITH GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR, LANDSCAPE CONTRACTOR, OWNER, ARCHITECT, AND LANDSCAPE ARCHITECT.
- LANDSCAPE CONTRACTOR TO TEST AVAILABLE WATER PRESSURE PRIOR TO BEGINNING ANY WORK. PROVIDE LANDSCAPE ARCHITECT WITH WRITTEN PSI RESULTS.**
- ALL WORK PER LOCAL CODE. INSTALLATION PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
- CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS, FEES, AND REQUIRED CITY INSPECTIONS.
- SUBMITTALS:
 - SUBMIT FIVE (5) COPIES OF EACH ITEM LISTED BELOW FOR LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL.
 - PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED,
 - CONTROL WIRING PATH DIAGRAM,
 - "AS-BUILT" DRAWINGS.
 - OPERATION AND MAINTENANCE MANUALS.
- PROVIDE AND KEEP UP TO DATE A COMPLETE "AS-BUILT" RECORD SET OF PRINTS WHICH ARE TO BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS AND/OR EXACT "AS-BUILT" LOCATIONS, SIZES AND KIND OF EQUIPMENT. THIS SET OF DRAWINGS ARE TO BE KEPT ON SITE AND ONLY AS THE RECORD SET. ALL WORK IS TO BE NEAT AND LEGIBLE ANNOTATIONS THEREON DAILY AS THE WORK PROCEEDS, SHOWING WORK AS ACTUALLY INSTALLED. DIMENSION FORM TWO (2) PERMANENT POINTS OF REFERENCE, BUILDING CORNERS, WALKS, OR ROAD INTERSECTIONS, ETC., THE LOCATION OF THE FOLLOWING:
 - CONNECTION TO WATER LINES (P.O.C.),
 - CONNECTIONS TO ELECTRICAL POWER,
 - GATE VALVE, QUICK COUPLERS, AND REMOTE CONTROL VALVE,
 - ROUTING OF MAINLINE (DIMENSION MAXIMUM 100' ALONG ROUTING),
 - ROUTING OF CONTROL WIRING,
 - OTHER RELATED EQUIPMENT AS DIRECTED BY THE LANDSCAPE ARCHITECT.
- PREPARE AND PROVIDE PRIOR TO COMPLETION OF CONSTRUCTION, A THREE RING BINDER CONTAINING THE FOLLOWING INFORMATION:
 - INDEX SHEET STATING CONTRACTOR'S ADDRESS, TELEPHONE NUMBER, FAX, E-MAIL AND A LIST OF EQUIPMENT WITH NAME AND ADDRESS OF LOCAL MANUFACTURER'S REPRESENTATIVES,
 - CATALOG AND PARTS SHEETS ON EVERY MATERIAL AND EQUIPMENT INSTALLED UNDER THIS, CONTRACT,
 - GARANTEE STATEMENT,
 - COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS ON ALL MAJOR EQUIPMENT.
 - CONSTRUCTION DETAILS FROM THE PROJECT,
 - COMPLETE TROUBLE-SHOOTING GUIDE TO COMMON IRRIGATION PROBLEMS,
 - WINTERIZATION AND SPRING START-UP PROCEDURES,
 - CHART OF APPROXIMATE WATERING TIMES FOR SPRING, SUMMER, AND FALL,
 - A COPY OF THE "AS-BUILT" DRAWINGS AND CONTROLLER CHART.

- ALL VALVES TO BE PLACED IN "CARSON" GRADE LEVEL BOXES WITH BOLT-LOCK LIDS (OR APPROVED EQUIVALENT). SET BOXES 2 INCHES HIGHER THAN FINISH GRADE IN MULCH AREAS AND FLUSH WITH FINISH GRADE IN LAWN AREAS. JUMBO BOX FOR CHECK VALVE, 10" ROUND BOX FOR GATE/QUICK COUPLER/WIRE SPLICES, AND 12" STANDARD FOR CONTROL VALVES. PROVIDE BOX EXTENSIONS AS REQUIRED.
- MAINLINE PIPE TO BE BURIED 24 INCHES, LATERALS 12 INCHES, AND SLEEVES 24" INCHES BELOW FINISH GRADE. NO ROCK OR DEBRIS TO BE BACKFILLED OVER PIPE.
- HEAD AND LINE POSITIONING IS DIAGRAMMATIC ON PLAN. ADJUST IN FIELD AS NECESSARY FOR 100 PERCENT COVERAGE. VALVES TO BE POSITIONED ADJACENT TO PAVEMENT/CURBS, IN SHRUB BEDS WHERE POSSIBLE.
- FAMILIARIZE OWNERS FACILITY OPERATOR WITH IRRIGATION SYSTEM FUNCTION, CONTROLLER PROGRAMMING, SYSTEM OPERATION AND MAINTENANCE REQUIREMENTS.
- SPRINKLERS ON RISERS WILL NOT BE ALLOWED UNLESS NOTED ON PLANS.
- RADIUS REDUCTION TO BE MADE BY USE OF PRESSURE ADJUSTMENT, SCREENS, AND/OR ALTERNATE NOZZLES. IN-NOZZLE ADJUSTMENT IS LIMITED TO 10 PERCENT FOR SPRAY HEADS AND PER MANUFACTURER'S LIMITS FOR OTHER SPRINKLERS. SPRINKLER SPACING NOT EXCEED 60% OF THE DIAMETER OF THE PUBLISHED DATA.
- ALL CONTROL WIRE SPLICES TO BE MADE AT VALVE BOXES WITH WATER TIGHT ELECTRICAL SPLICES, 3M, SCOTT'S LOCK SEAL TACK 3576-78, OR EQUIVALENT.
- EACH VALVE BOX TO CONTAIN A MINIMUM OF TWO (2) SPARE ORANGE CONTROL WIRES FOR JACKETED WIRE. ROUTE SPARE WIRES FROM THE CONTROLLER TO THE LAST VALVE OF EACH MAINLINE BRANCH. COMMON WIRE TO BE WHITE. SINGLE STRAND WIRE TO BE A MINIMUM OF 14 GAUGE.
- ALL ELECTRICAL EQUIPMENT TO BE U.L. TESTED AND APPROVED, AND BEAR THE U.L. LABEL.
- CROSS CONNECTION PROTECTION INSPECTION REQUIRED. THE BACKFLOW DEVICE TO BE TESTED UPON THE ORIGINAL INSTALLATION. THE TESTING TO BE PERFORMED BY A PERSON HOLDING A CURRENT CERTIFICATE AS A BACKFLOW TESTER. THE TEST REPORT TO BE SUBMITTED TO THE LOCAL WATER DISTRICT, OR PURVEYOR, AND OWNER WITH A COPY TO BARGHAUSEN CONSULTING ENGINEERS, INC. CONTRACTOR TO INCLUDE TESTING IN THE SCOPE OF WORK. OWNER IS RESPONSIBLE FOR ANNUAL INSPECTIONS AFTER THE INTIAL INSPECTION.
- CONTRACTOR TO PROVIDE SYSTEM WINTERIZATION/SPRING SERVICE WHEN INSTALLATION HAS BEEN COMPLETED WITHIN 90 DAYS OF NOVEMBER 1 FOR WINTERIZATION, OR MAY 15 FOR SPRING SERVICE. SERVICE TO BE PERFORMED AS NEAR AS PRACTICAL TO THE ABOVE DATES, OR AS FREEZE/PRECIPITATION CONDITIONS DETERMINE SERVICE NEED.
- IRRIGATION PIPES SHALL BE SIZED PER IRRIGATION DISTRICT REQUIREMENTS, OR AT A MINIMUM OF THE NEXT CULVERT DOWNSIDE. ALL PIPE TERMINATIONS NOT ENDING IN A STRUCTURE (CB OR MANHOLE) SHALL HAVE A BEVELED END. INLET PIPES SHALL HAVE A TRASH RACK. ALL IRRIGATION PIPES AND DITCHES SHOULD BE RELOCATED OFF OF CITY RIGHT OF WAY IN PRIVATE EASEMENTS, IF POSSIBLE. IRRIGATION AND STORMWATER SYSTEMS SHALL BE KEPT SEPARATE. IRRIGATION MARKER TAPE OVER MAINS AND SCH 40 PVC PIPE WITH TRACER WIRE, THE TRACER WIRE SHALL BE 12 GAUGE USE PURPLE PLASTIC COATED SOLID COPPER (CITY OF ELLENSBURG PUBLIC WORKS DEVELOPMENT STANDARDS).

UTILITY CONFLICT NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER BY POT-HOLING THE UTILITIES AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 811 AND THEN POT-HOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL NOTIFY BARGHAUSEN CONSULTING ENGINEERS, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

Revision

Revised Per Comments

Appr.

Cd.

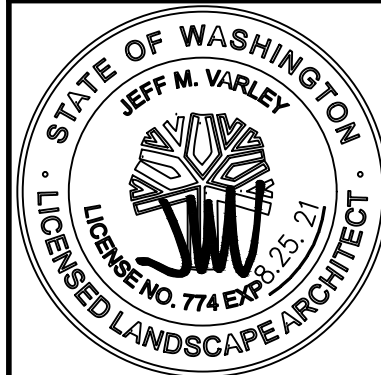
By

Date

No.

Title:
IRRIGATION NOTES AND DETAILS
BROWN BEAR CAR WASH
55 NW GILMAN BLVD.
ISSAQUAH, WA

For:
CAR WASH ENTERPRISES, INC.
3977 LEARY WAY NW
SEATTLE, WASHINGTON 98107



Scale:

Horizontal

Vertical

N/A

Designed

Drawn

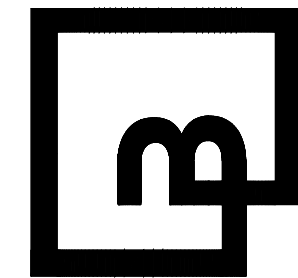
Checked

Approved

Date

10/06/19

Barghausen
Consulting Engineers, Inc.
18215 72nd Avenue South
Kent, WA 98032
425.251.6222
barghausen.com



Job Number

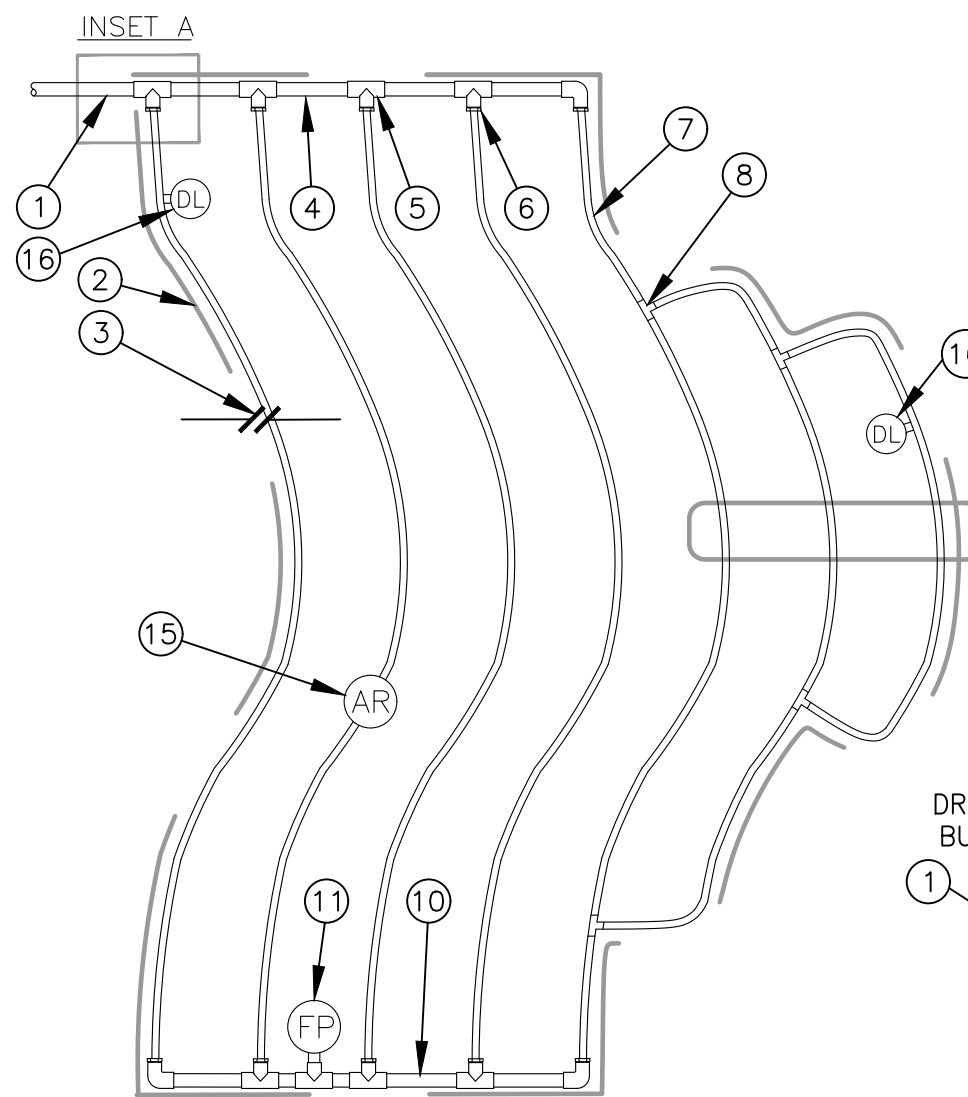
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Sheet

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IRRIGATION DETAILS
FOR
BROWN BEAR CAR WASH
SE ¼ OF NE ¼ OF SEC. 28, TWN. 24 N, RGE. 6 E, W.M.
CITY OF ISSAQUAH, KING COUNTY, WASHINGTON

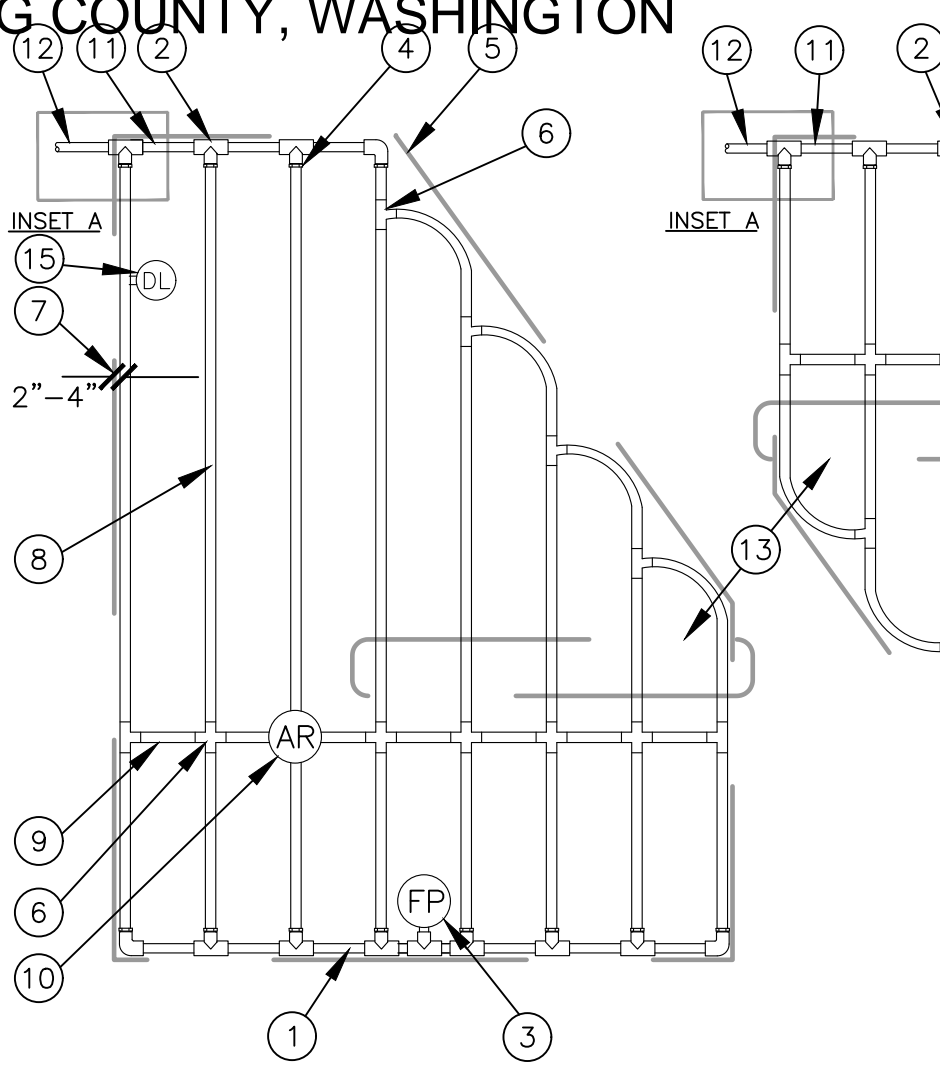


NOTES:

1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE INSTALLATION SPECIFICATIONS ON RAIN BIRD WEB SITE (WWW.RAINBIRD.COM) FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.
3. INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
4. WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

- 1 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 2 PERIMETER OF AREA
- 3 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 4 PVC SUPPLY MANIFOLD
- 5 PVC SCH 40 TEE OR EL (TYPICAL)
- 6 BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- 7 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE

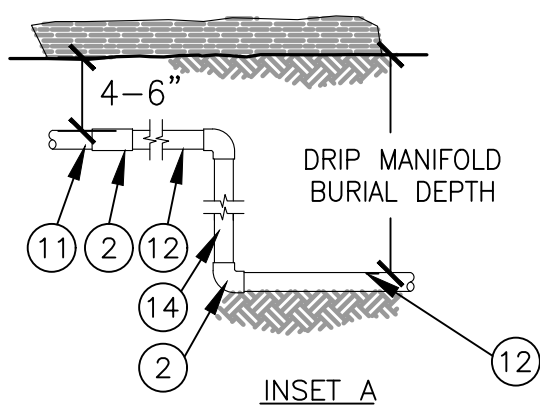
- 8 ARB X BARB INSERT TEE: RAIN BIRD XFF-TEE (TYPICAL)
- 9 TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
- 10 PVC FLUSH HEADER
- 11 FLUSH POINT: SEE RAIN BIRD XFS DETAILS FOR FLUSH POINT INSTALLATION
- 12 PVC RISER PIPE
- 13 TURF OR MULCH
- 14 FINISH GRADE
- 15 1/2" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
- 16 DRIPLINE INDICATOR. SEE DETAIL FOR ADD'L INFO



- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
- 4 BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- 5 PERIMETER OF AREA
- 6 BARB X BARB INSERT TEE OR CROSS: RAIN BIRD XFF-TEE OR RAIN BIRD XFD-CROSS (TYPICAL)
- 7 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 8 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
- 9 RAIN BIRD XF SERIES BLANK TUBING
- 10 1/2" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
- 11 PVC SUPPLY MANIFOLD
- 12 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 13 TOTAL LENGTH OF SELECTED DRIPLINE SHOULD NOT EXCEED LENGTH SHOWN IN TABLE
- 14 PVC SCH 40 RISER PIPE
- 15 DRIPLINE INDICATOR. SEE DETAIL FOR ADD'L INFO

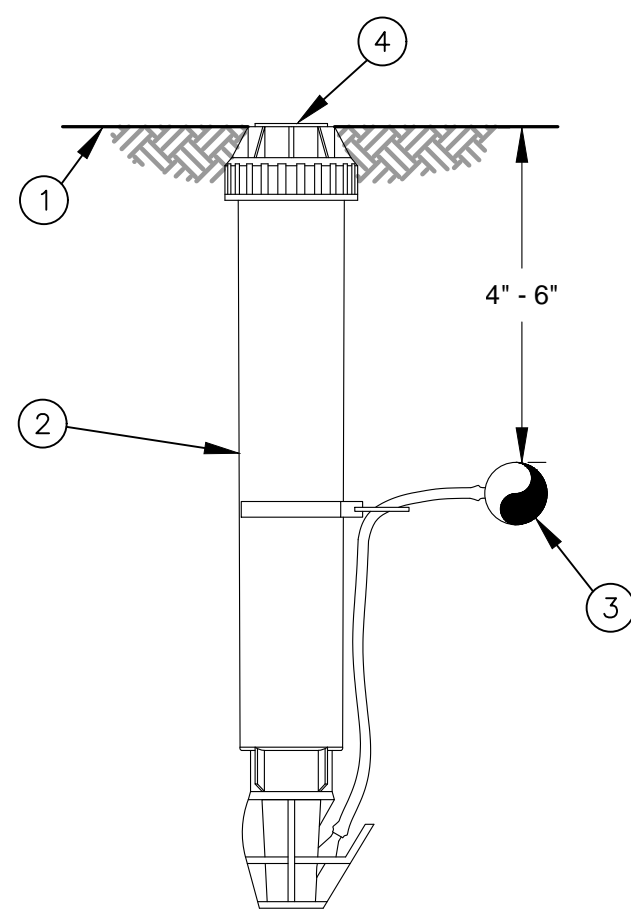
NOTES:

- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XFS DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
- AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.



DRIPLINE ODD CURVES LAYOUT

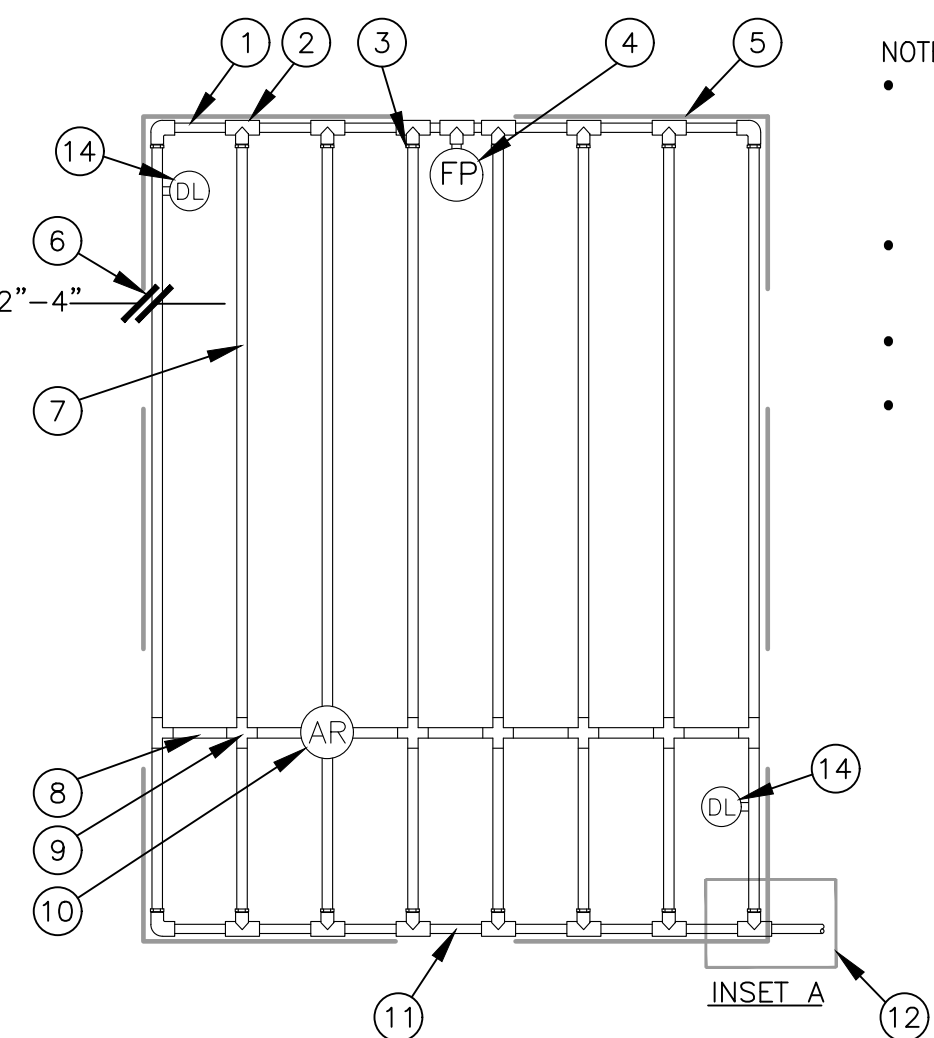
NOT TO SCALE



- 1 FINISH GRADE/TURF
- 2 OPERATION INDICATOR RAIN BIRD MODEL: OPERIND
- 3 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
- 4 PURPLE CAP TO INDICATE NON-POTABLE WATER

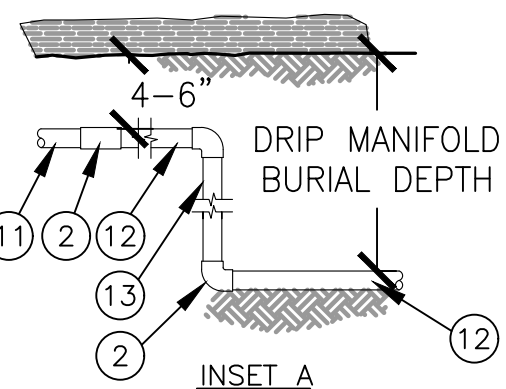
- NOTE:
1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.
 2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE, SET THE ARC TO 1/4 PATTERN. THE FLOW FROM THE NOZZLE, 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

DRIP IRRIGATION DRIPLINE INDICATOR



NOTES:

- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XFS DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
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- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.



DRIPLINE END FEED LAYOUT

NOT TO SCALE

DRIPLINE SLOPED LAYOUT

NOT TO SCALE

- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- 4 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 7 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
- 8 RAIN BIRD XF SERIES BLANK TUBING
- 9 BARB X BARB INSERT TEE OR CROSS: RAIN BIRD XFF-TEE OR RAIN BIRD XFD-CROSS (TYPICAL)
- 10 1/2" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
- 11 PVC SUPPLY HEADER
- 12 PVC DRIP MANIFOLD FROM RAIN BIRD CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 13 PVC SCH 40 RISER PIPE
- 14 DRIPLINE INDICATOR. SEE DETAIL FOR ADD'L INFO

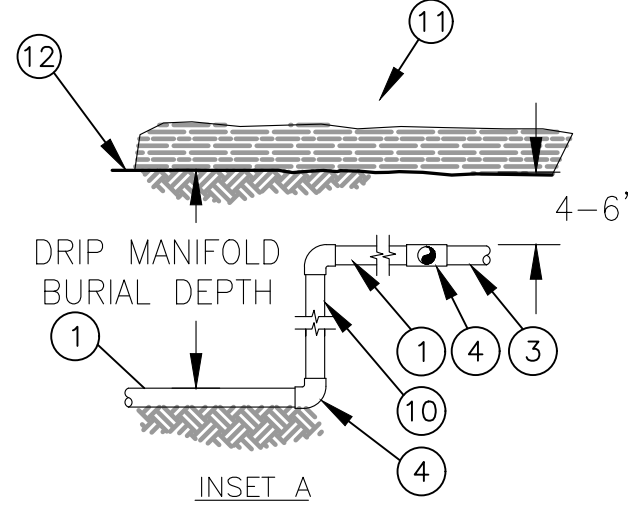
XFS Dripline Maximum Lateral Lengths (Feet)						
Inlet Pressure (psi)	12" Spacing		18" Spacing		24" Spacing	
	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)	Nominal Flow (gph)
15	273	155	314	250	424	322
20	318	169	353	294	508	368
30	360	230	413	350	586	414
40	395	255	465	402	652	474
50	417	285	528	420	720	488
60	460	290	596	455	780	514

DRIPLINE IRREGULAR SHAPED LAYOUT

NOT TO SCALE

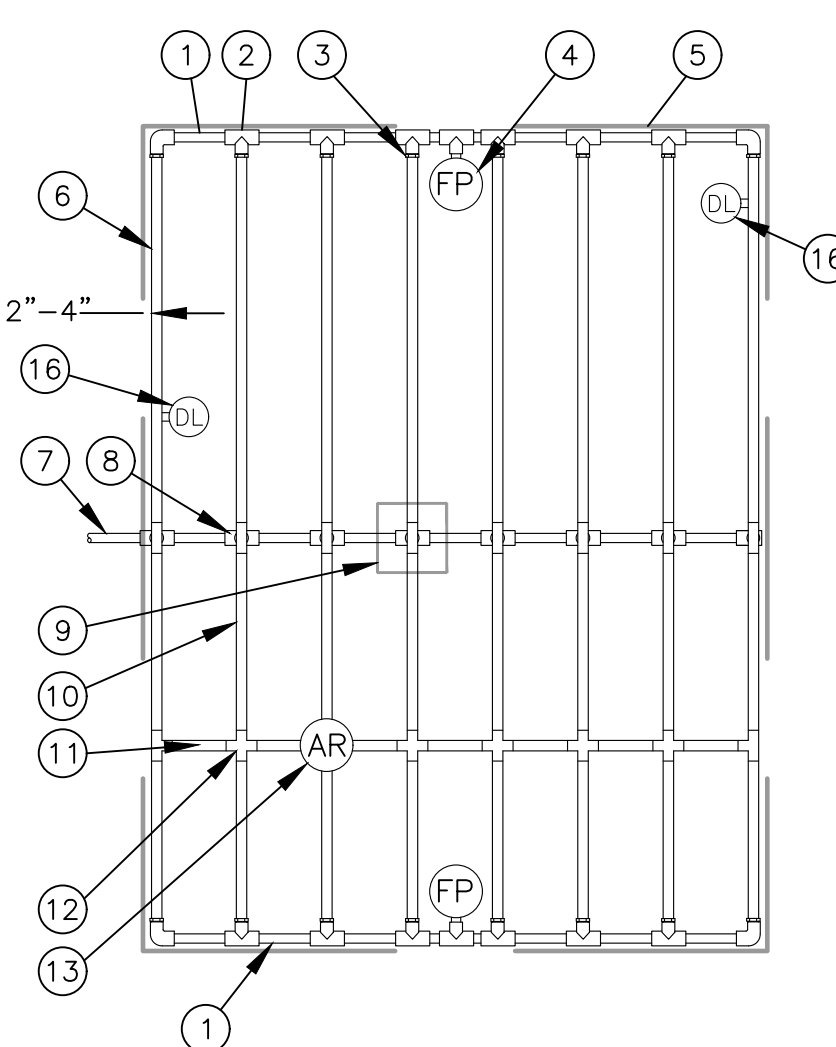
NOTES:

- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. DISTANCE BETWEEN LATERAL ROWS FOR BOTTOM 1/3 OF SLOPE TO BE SPACED GREATER THAN OPTIMAL ROW DISTANCE. SEE RAIN BIRD XFD DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACING.
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
- WHEN ELEVATION CHANGE EXCEEDS 8 FEET IT IS RECOMMENDED THAT A NEW DRIPLINE ZONE BE CREATED.
- INSTALL AIR RELIEF VALVE AT HIGH POINTS IN DRIP LATERAL.
- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

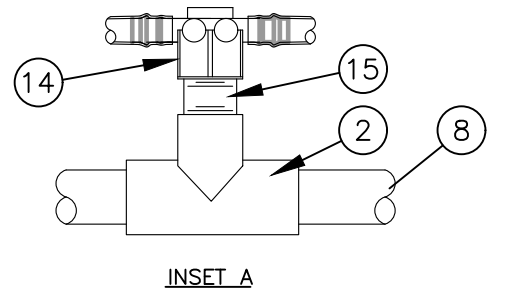


- 1 PVC DRIP MANIFOLD FROM RAIN BIRD CONTROL ZONE VALVE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 2 BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- 3 PVC SUPPLY HEADER
- 4 PVC SCH 40 TEE OR EL (TYPICAL)
- 5 SUB-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE (TYPICAL) POTABLE: XFS DRIPLINE NON-POTABLE: XFSP DRIPLINE
- 6 FLUSH POINT: SEE RAIN BIRD XFS DETAILS FOR FLUSH POINT INSTALLATION
- 7 PVC FLUSH HEADER
- 8 1/2" AIR RELIEF VALVE: RAIN BIRD MODEL: ARV050 SEE RAIN BIRD XFS DETAILS FOR AIR RELIEF INSTALLATION
- 9 DRIPLINE INDICATOR. SEE DETAIL FOR ADDITIONAL INFORMATION

- 10 PVC RISER PIPE
- 11 TURF OR MULCH
- 12 FINISH GRADE



- 1 PVC EXHAUST HEADER
- 2 PVC SCH 40 TEE OR EL (TYPICAL)
- 3 BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
- 4 FLUSH POINT (TYPICAL) SEE RAIN BIRD DETAIL "XFS FLUSH POINT" OR "XFS FLUSH POINT WITH BALL VALVE"
- 5 PERIMETER OF AREA
- 6 PERIMETER DRIPLINE PIPE TO BE INSTALLED 2"-4" FROM PERIMETER OF AREA
- 7 PVC SUPPLY PIPE FROM RAIN BIRD CONTROL ZONE KIT (SIZED TO MEET LATERAL FLOW DEMAND)
- 8 PVC SUPPLY MANIFOLD
- 9 CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL)- SEE INSET A



NOTES:

- DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE RAIN BIRD XF-SOI DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
- LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM LENGTH SHOWN IN THE ACCOMPANYING TABLE.
- AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINT OF AREA.
- WHEN USING 17MM INSERT FITTINGS WITH DESIGN PRESSURE OVER 50PSI, IT IS RECOMMENDED THAT STAINLESS STEEL CLAMPS BE INSTALLED ON EACH FITTING.

DRIPLINE CENTER FEED LAYOUT

NOT TO SCALE

Revision
No. Date By Cld. Appr.
10/06/2020 JPS

Title:
CAR WASH ENTERPRISES, INC.
3977 LEARY WAY NW
SEATTLE, WASHINGTON 98107



Scale:
Horizontal
Vertical
N/A

Designed: TR
Drawn: TR
Checked: JMW
Approved: JMW
Date: 10/06/19

Barghausen
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Job Number
20693
Sheet
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